

DOCUMENT RESUME

ED 113 282

SO 008 690

AUTHOR Saveland, Robert N.; Pannell, Clifton W.
TITLE Inventory of Recent U.S. Research in Geographic Education. Occasional Paper No. 4.
INSTITUTION Georgia Univ., Athens. Geography Curriculum Project.
PUB DATE Sep 75
NOTE 64p.
AVAILABLE FROM Geography Curriculum Project, 107 Dudley Hall, University of Georgia, Athens, Georgia 30602 (\$1.50)

EDRS PRICE MF-\$0.76 HC-\$3.32 Plus Postage
DESCRIPTORS *Bibliographies; College Instruction; *Educational Research; Elementary Secondary Education; Environmental Education; Evaluation; Geographic Concepts; *Geography; *Geography Instruction; Higher Education; Instructional Materials; Research Design; *Research Methodology; Research Projects; Teacher Education; Urban Areas

IDENTIFIERS *Geography Curriculum Project

ABSTRACT

The third in a series of geography bibliographies published by the Geography Curriculum Project, this bibliography provides an overview of work in the field of geographic education and research according to particular areas of interest from 1965 through July 1975. Three main sources were searched for entries: ERIC Data Base, "Dissertation Abstracts International," and the "Education Index." The chapters include: (1) history and philosophy; (2) curriculum--concepts, disciplines, structure, and urban geography; (3) method--inquiry, models, field work, games and simulation, maps, and media; (4) materials--analyses of texts, visuals, and geography projects; (5) evaluation--course, achievement, and awareness evaluation; and (6) teacher training--institutes, elementary, secondary, and college. Each entry contains the title, author, journal, pages, volume, and date. An author index concludes the document. (Author/JR)

* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *

ED113282

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

INVENTORY OF RECENT
U. S. RESEARCH IN
GEOGRAPHIC EDUCATION



Robert N. Saveland
Clifton W. Pannell
University of Georgia

Geography Curriculum Project
Publication Paper No. 4
University of Georgia

September 1973

00002/b

TABLE OF CONTENTS

Inventory of Recent U. S. Research in Geographic Education

Foreword	i
Introduction.	ii
Map, Figure 1	xi
Chapter 1 - History and Philosophy	1
General	
Regional	
Biographies	
Elementary	
Secondary	
Status	
College	
Chapter 2 - Curriculum	5
General	
Integrating Disciplines	
Knowledge-Structure	
Concepts	
The Disadvantaged	
Scale-Distribution-Location	
Landscapes-Rural	
Urban Geography	
Environmental Education	
International Education	
Elementary	
Secondary	
College	
Chapter 3 - Method	14
General	
Inquiry	
Models	
Field Work	
Games-Simulation	
Use of Maps	
Media	
Individualized Learning	
Elementary	
Secondary	
College	

Chapter 4 - Materials	24
General	
Analyses of Textbooks	
Visuals	
Humanities-Bilingual Materials	
State Geographies	
Elementary	
Georgia Geography Curriculum Project	
Minnesota Project Social Studies	
Secondary	
High School Geography Project	
College	
Commission on College Geography	
Chapter 5 - Evaluation	32
General	
Course Evaluation	
Achievement Tests	
Awareness and Retention	
Maps Conceptualization	
Spatial Studies	
Elementary	
Secondary	
College	
Chapter 6 - Teacher Training	38
General	
Institutes	
Elementary	
Secondary	
College	
Author Index	41

FOREWORD

This Inventory of Recent U.S. Research in Geographic Education is the third bibliography circulated to the profession through the Geography Curriculum Project, University of Georgia. Previous bibliographies which have been issued and which are still available are A Bibliography for Geographic Education (Ball, 1969) and Bibliography on Geographic Thought, Philosophy, and Methodology, 1950-1974 (Wheeler, 1975).

Bibliographies make an important contribution to scholarly research by identification of the literature. In-depth reviews are needed which analyze and synthesize the state of thought and the quality of research in geographic education. Hopefully, this inventory will facilitate the next step of preparing an essay, or series of critical essays, on recent research in geographic education.

The Geography Curriculum Project is pleased to cooperate in this effort.

M.J. Rice, Director

INTRODUCTION

The impetus for compiling this inventory came from the United Kingdom as the result of a request from M.C. Naish of the University of London, Institute of Education, to prepare a report on recent United States research in geographic education. The Geographical Association paper No. 18, Some Aspects of the Study and Teaching of Geography in Britain: A Review of Recent British Research, was suggested as a model. In consideration of this request, it became apparent that it would first be necessary to prepare an inventory and selected bibliography of U.S. research.

In April 1972 a special issue (Vol. LXXI, No. 4) of The Journal of Geography on "Research in Geographic Learning" was published. This contained excellent essays on the prospects, nature, process, and dissemination of research in geographic education, but did not include a comprehensive search of the literature. Prior to this, in 1967, the National Council for Geographic Education published Research Needs in Geographic Education: Suggestions and Possibilities, which was based on a conference held in October of 1964 at Columbia University's Greystone Center. Likewise, this publication omitted a review of research representative of the range and direction of studies in the 1950's and 60's. From these and other sources, it is clear that in the last decade serious interest has focussed on the questions--what are researchable topics in geographic education, what has research been accomplishing in geographic education, and what are the priorities for these topics in today's educational milieu. However, there has not always been agreement on these questions, nor

indeed on whether these are the truly relevant and important questions.

Research, whether in geography or some other academic discipline, evolved as a significant and legitimate human activity from the early methodologies and techniques practiced in the natural sciences. In general, such activities were empirically based and followed lines of inductive and deductive reasoning [observation → idea formulation → preliminary testing, more data collection, and experimentation → theory formulation → final testing → conclusion (theory acceptance or rejection).]¹ Such a format labelled broadly "scientific" has served as a guide for most activities termed research that are carried on in academic institutions. There are many ways in which these activities are pursued and there are great variations in the degree of rigor applied to such activities. For example, Massialas has distinguished three types of strategies used in research:

- (1) common sense observation and generalization
- (2) a quasi-scientific approach
- (3) a rigorous, scientific approach²

The common sense approach, he asserts, includes studies that advance claims without supporting hard data, tests, and evaluations, or as he puts it, "such studies are frequently of the I-used-such-and-such- classroom-aids-and-I-got-favorable-results-type." The

¹ See Robert W. Durrenberger, Geographical Research and Writing (Thomas Y. Crowell Co., New York, 1971), p. 20.

² Byron G. Massialas, Research Prospects in the Social Science (Bloomington, Ind.: School of Education, Indiana University, 1962), p. 10.

second type, quasi-scientific studies, lack adequate controls and testing methods. Limitations as to their validity result from failure to analyze assumptions and concepts thoroughly. Such studies, however, may contain valuable insights of a more general or preliminary nature. Rigorous scientific analysis, the third category, by contrast, is explicit in its background methodology, employs up-to-date techniques, details its experiments and tests, and relates accurately its findings and conclusions. Massialas notes that few studies of the scientific type exist in the social studies. As this inventory indicates, despite more than a decade of progress, the record of rigorous scientific research projects in geographic education is meagre. Most of the studies, reports, and projects contained in this inventory fall into the first two categories suggested by Massialas, a fact that tells us much about the status and condition of contemporary research in geographic education.

JUSTIFICATION

As presented here, this inventory provides an overview of work in the field of geographic education according to particular areas of interest and periods of time. As such, it has immediate practical use by the student who is searching out topics for study, or who is preparing a review of the literature for a dissertation. For other researchers, this inventory can suggest neglected areas of investigation. It may call attention to studies which have already been done, thus avoiding duplication of effort and aiding the dissemination process. Writers and editors of journal articles

v

may find this inventory especially helpful. Teachers may use it in preparing reading lists for their classes. A study of listings under particular topics can lead to new syntheses. In balance, this and future inventories should contribute to an improvement in the quality of research in geographic education.

THE COMPILATION PROCESS

At the outset it was decided to focus attention primarily on the decade 1965 to 1976, inasmuch as this was to be a review of recent research. Also, possible Canadian entries were omitted because of the national basis for this review. Three main sources were searched for research information and these provided the data for the listed citations. A description of these sources and an explanation of procedures follow.

ERIC DATA FILES

An Educational Research Information Center (ERIC) search was conducted at the Computer Services Division of the University of Georgia from July 26 to July 31, 1975. ERIC Research in Education volumes 68, 69, 70, 71, 72, 73, 74 and 75:01-02 were searched using the following key words and terms:

Geography Curriculum Project	World Geography
Geography of Education	Human Geography
Geographic Education	Physical Geography
Geography Instruction	Area Studies
Maps	Geographic Distribution
Map Skills	Geographic Location

Geographic Regions

Teaching

Geography

Instruction

The total number of citations received as a result of this search was 161 distributed as follows:

1968	7	1972	33
1969	4	1973	25
1970	7	1974	31
1971	35	1975	19

These figures suggest a further investigation as to the reasons for the marked increase in citations after 1970. On the whole it can be seen that this is a manageable number with which to be involved in categorizing and classifying.

Dissertation Index

Fortunately there now exists a Comprehensive Dissertation Abstract Author Index 1861-1972³ in 37 volumes. Volume 16 is Geography and Geology. A search was made of this volume for topic headings applicable to this inventory. These included: (1) p. 31 Curricula-Curriculum; (2) p. 42 Education-Educational; (3) p. 57 Grades; (4) p. 86-87 Materials-Methodology; (5) p. 129 School-Schools; and (6) p. 145 Teachers-Teaching.

Relevant pages of Volume 16 were photocopied. The entries were then cut out and pasted on 3 x 5 cards. Following this the cards were sorted according to the classification system used for this inventory.

³Published by Xerox University Microfilms, Ann Arbor, Michigan, 1973.

For the years 1973 to June 1975 it was necessary to consult individual volumes of the dissertation index by months and to transcribe the entries onto cards. Here all references under the heading of "Geography" were investigated, and of those almost 150 applicable to this inventory were selected. Institutional sources of the dissertations are mapped in Figure 1.

Education Index

The Education Index⁴ is a cumulative index to educational material in the English language. Approximately 250 publications are indexed. Selections of periodicals for indexing is accomplished by subscribers voting their preference, giving due consideration to the reference values of the periodicals suggested.

Volumes 16 to 24 cover the period from July 1965 to June 1974. These and Volume 26 through issue No. 10 (July 1975) were consulted in preparing this inventory.

Pages were photocopied which contained references under such headings as:

Geography--	Terminology
Activities	Teaching
Correlation with their subjects	Research
Courses of study	Colleges and universities
Programmed teaching	Junior high schools
Teacher education	Teaching methods

All the articles listed were not classified under the research rubric, consequently it was necessary to make a judgment concerning

⁴Published monthly by H.W. Wilson Company, 950 University Avenue, Bronx, N.Y., 10452.

which ones to include in this inventory. Each of the compilers reviewed the list placing check marks opposite those articles which might be considered research articles. All references checked were then cut out and placed on 4 x 6 cards. After eliminating duplications and sorting into the classification system being used, it was discovered that there was a total of 209 references. Since this was considered to be a manageable number, no further refinement of the list was made to eliminate borderline research articles. Citations are not standardized, but are provided in the form in which they were furnished in the three main bibliographic sources. Indexing alphabetically by author surname is supplied at the back of the listing.

THE CLASSIFICATION SYSTEM

Several traditional and established topics suggested themselves as a basis for primary separation in the card sorting process. These were (1) history and philosophy, (2) curriculum, (3) method, (4) materials, (5) evaluation, and (6) teacher training. Accordingly they were adopted and became the chapters in the inventory.

Research at several educational levels had been carried out. Because researchers are apt to have special interests in work at the elementary, secondary, or college levels, a further subdivision was made. These categories became the basis for the major divisions within each chapter.

After making these separations, it was apparent that a number of sub-categories existed where research had clustered in certain areas. Most obvious of these, of course, is the High School Geography Project. Research interests in this project range from history and philosophy through curriculum and method to teacher training. However,

it was considered desirable to put all the references to the H. S. G. P. in one place, so these entries appear in the "Materials" chapter, their most logical location.

The contents page has a listing of the sub-categories which evolved from the sorting process. These sub-topics indicate special interest areas of research and are side-headings within the chapters. The citations under these headings are usually arranged in chronological order, so that developments through time may be observed. In some instances a topical arrangement is more logical, as in the biography section of Chapter 1 where the studies are arranged alphabetically according to the name of the notable person.

LIMITATIONS

Although this study has been greatly aided by the use of computer bibliography search techniques, these techniques have limitations. Access to the computer search system is gained by a set of one-word command statements; obviously, if appropriate key words are not used, then certain relevant studies will not print out. While some of these omissions have been discovered already, especially in checking against Browning's, A Bibliography of Dissertations in Geography: 1901 to 1969,⁵ it is anticipated that readers will call other omissions to our attention.

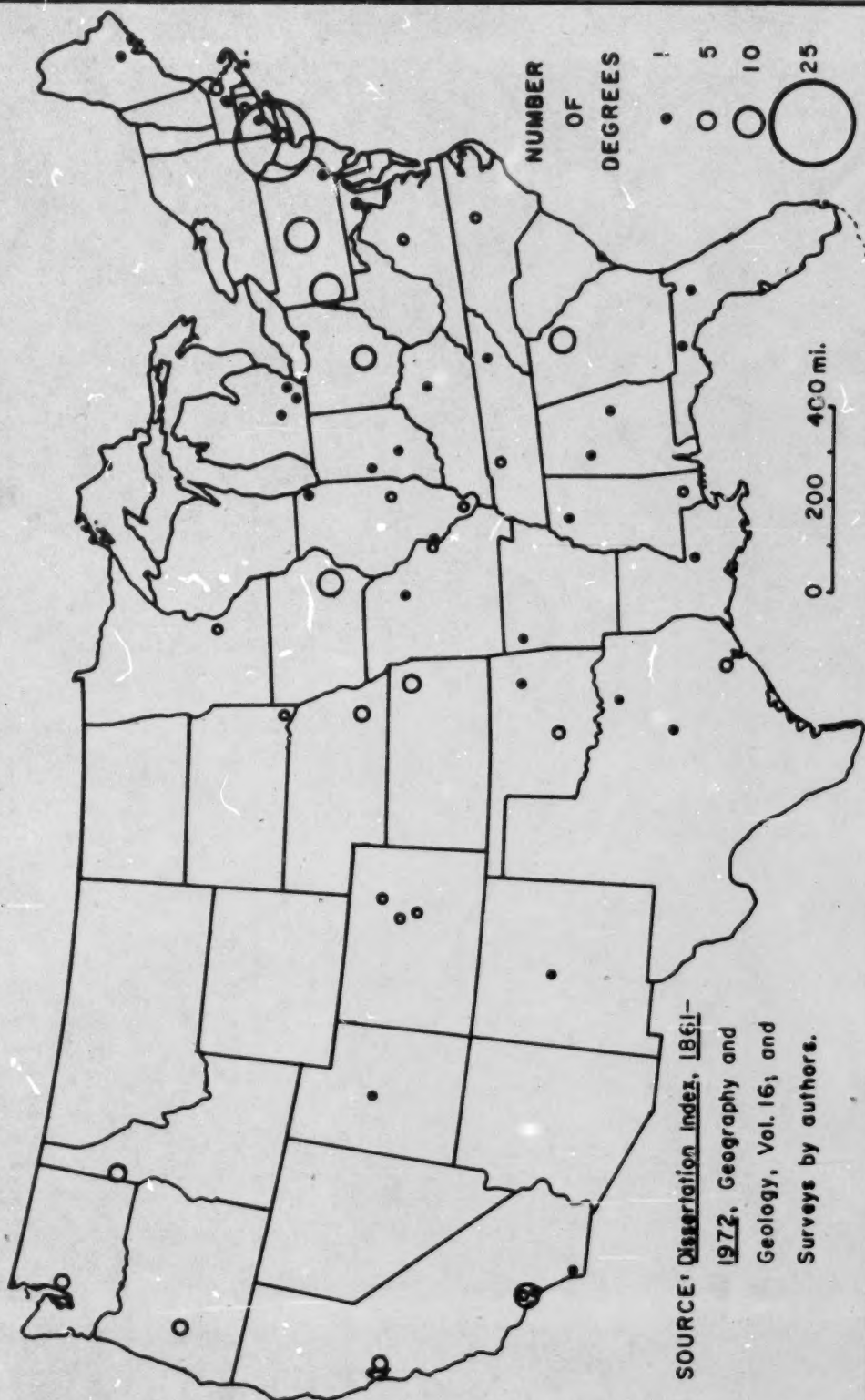
At first, it was intended to submit our classification system and the inventory to a review board prior to publication. The time lag inherent in such a process, the proddings for responses, the duplication

⁵Published by University of North Carolina at Chapel Hill, Department of Geography, Studies in Geography, No. 1, 1970, \$3.00.

of typing effort, and mailing costs caused us to reconsider this procedure. In practice, the classification system grew out of our card collection and all readers will serve as our review board. As subsequent printings are made, the inventory can be corrected and updated.

Note: The map on the following page shows the location of the institutions where dissertations in geographic education were completed in the period 1910-1975. Dissertations prior to 1965 were included in this inventory of recent research in order to give perspective to the various topics and trends.

DISSERTATIONS IN GEOGRAPHIC EDUCATION, 1910-75



CHAPTER 1. HISTORY AND PHILOSOPHY

General

"State Geographical Societies Today," J.W. Vining, Journal of Geography, 74, pp. 167-79, March 1975.

"What has happened to Geography in the USA?" A.D. Beck, Journal of Geography, 72, p. 7, April 1973.

The Concept of Community: A Geographical Perspective, Palm, Risa Ileen Kahn, (Ph.D. 1972, University of Minnesota), 33/11, p. 5345B.

Research Needs in Geographic Education: Suggestions and Possibilities, Illinois State University, Normal; National Council for Geographic Education, Geographic Education Series Number 7, EDRS Research in Education (ERIC), 1972, 07 ED 059139, 52 p.

"Old Methods Re-examined," N. Proctor, Times (London) Educational Supplement, 2919, pp. 53-5, April 30, 1971. (non U.S.)

The Role of Values in the Teaching of Geography, Cirrincione, Joseph M., (Ph.D. 1970, The Ohio State University), 31/09-A, 155 p.

"Nationalism in Early American Geographies: 1784-1845," M.F. Antonelli, Journal of Geography, 69, pp. 301-5, May 1970.

"Some Trends and their Implications for Geographic Education," A.A. Schmieder, Journal of Geography, 68, pp. 208-15, April 1969.

"Recurrent Themes in the Historical Geography of the United States," J.R. Whitaker, Peabody Journal of Education, 46, pp. 9-13, July 1968.

"More Geography, Not the Elements of...", R.A. Harper, Journal of Geography, 67, pp. 132-3, March 1968.

"Model for Geography," R.L. Nostrand, Journal of Geography, 67, pp. 13-17, January 1968.

"Values in Geography," H.B. Johnson, Journal of Geography, 66, pp. 102-7, March 1967.

"Fundamentals of Geographic Education," R.H. Brown, Journal of Geography, 65, pp. 410-15, December 1966.

"Why Study Geography?" R. Hartshorne, Journal of Geography, 65, pp. 100-2, March 1966.

"Conceptual Structure for Geography," P.E. James, Journal of Geography, 64, pp. 292-8, October 1965.

"Depth and Breadth in Social Geography," N.V. Scarfe, Journal of Geography, 64, pp. 153-8, April 1965.

"Why the Concern?" P. Bacon, Childhood Education, 41, pp. 331-2, March 1965.

"Rediscovering the Earth," G.F. White, American Education, 1, pp. 8-11, February 1965.

"Accents in Geography," H.H. Gross, Journal of Geography, 63, pp. 258-61, September 1964.

Study of Geography in Schools, Chapman A., (Ed.D. 1922, Harvard University) S0084.

Regional

"Regions and Regionalizing," C.F. Kohn, Journal of Geography, 69, pp. 134-40, March 1970.

"Children's Understanding of Regional Geography," B.S. Roberson, Journal of Geography, 67, pp. 152-5, March 1968.

"Regional Geography in Revolution," J.P. Augelli, Journal of Geography, 67, pp. 68-9, February 1968.

"Regional Concept and Geographic Education," J.T. Kostbade, Journal of Geography, 67, pp. 6-12, January 1968.

"Cultural Region: Framework for Teaching World Geography," W.B. Conroy, The Social Studies, 57, pp. 71+, February 1966.

"Brief for Regional Geography," J.T. Kostbade, Journal of Geography, 64, pp. 362-6, November 1965.

Biographies

The Contributions of Albert Perry Brigham to Geographic Education, Burdick, Alger E., (Ph.D. 1951, George Peabody College for Teachers), 134 p. W1951, p. 175.

The Contribution of Richard Elwood Dodge to Educational Geography, Griffin, Paul Francis, (Ph.D. 1952, Columbia University), 261 p., 12/04, p. 510.

Huntington and His Critics: The Influence of Climate on Civilization, Chappell, John E., Jr., (Ph.D. 1968, University of Kansas).

Ellen Semple: Contributions to the History of American Geography, Bronson, Judith Ann Conoyer, (Ph.D. 1973, St. Louis University), 35/05, p. 2877A.

J. Russell Smith: Teacher, Geographer, Conservationist, Rowley, Virginia Marie, (Ph.D. 1961, Columbia University).

Griffith Taylor and Canadian Geography, Tomkins, George Strong, (Ph.D. 1966, University of Washington), 557 p., 27/12-A, p. 4110.

Elementary

An Analysis of the Status of Geography Education in the Intermediate Grades in a Tri-State Regional Area, Veltkamp, James J., (Ed.D. 1967, University of South Dakota), 183 p., 28/05-A, p. 1635.

Trends in Elementary School Geography, 1928-1948, McAulay, John D.E. (Ph.D. 1949, Stanford University) W1949, p. 125.

Secondary

Geographic Education in Selected High Schools, McCauley, Huey Sifton, (Ed.D. 1969, Auburn University), 165 p., 30/09-A, p. 3642.

"High School Geography and What is Being Done About It," N. Helburn, Social Education, 30, pp. 631-2+, December 1966.

"High School Geography: Retrospect and Prospect," R.C. Anderson, Journal of Geography, 65, pp. 103-8, March 1966.

The Development of Secondary School Geography as an Independent Subject in the United States and Canada, Mayo, William Leonard, (Ph.D. 1964, The University of Michigan), 229 p., 25/12, p. 7027.

Geography in Secondary Education, Anderson, Randall Carl, (Ed.D. 1963, The University of Nebraska-Lincoln), 306 p., 24/06, p. 2318.

The Values of Geography as a High School Subject, Brooks, Nathan C., (Ed.D. 1956, The University of Oklahoma), 281 p., 17/02, p. 267.

A History of the Development of the Course of Study of Geography in the New York City High Schools (1898-1953), Becker, Christian F., (Ed.D. 1954, New York University), 151 p., 15/02, p. 220.

Status

"Status of Geography in the High School Today," M.L. Frick, Journal of Geography, 64, pp. 317-22, October 1965.

The Status of Geography in the Public Senior High Schools of California, Gandy, Willard Eugene, (Ed.D. 1960, Stanford University), 200 p., 20/11, p. 4347.

Factors Affecting the Exclusion of Geography From the Curriculum of Certain Colorado High Schools, Underwood, Robert Marshall, (Ed.D. 1964, University of Northern Colorado), 151 p., 25/09, p. 5209.

"Status of Geography in the Secondary Schools of Connecticut," W.M. Glowacki, Journal of Geography, 69, pp. 434-6, October 1970.

The Status of Geography in the Upper Secondary Grades of the Idaho Public Schools, Strader, Robert, (Ed.D. 1970, University of Idaho), 146 p., 3184A.

"Geography and Earth Science in the High Schools of Indiana," J.E. Landing, Journal of Geography, 66, pp. 84-5, February 1967.

The Status of Public Senior High School Geography in Maryland, 1964-65, Cotton, James Vaughn, (Ed.D 1968, The Pennsylvania State University), 205 p., 30/03-A, p. 924.

The Status of Geography in the Public Senior High Schools of Tennessee (1970-1971), McDowell, Horace Greeley, (Ed.D. 1971, The University of Tennessee), 163 p., 32/08-A, p. 4294.

College Geography

The Status of Geography Education in the Two Year Colleges of the United States, Robertson, Floyd Charles, (Ed.D. 1968, Brigham Young University), 108 p., 29/09-A, p. 2903.

"College Geography in the United States," J.F. Lounsbury, Journal of Geography, 67, pp. 282-7, May 1968.

An Examination of Some Factors Related to the Rise and Decline of Geography As a Field of Study at Harvard, 1638-1948, Morris, Rita Mary, (Ph.D. 1962, Harvard University), x1962, p. 64.

CHAPTER 2. CURRICULUM

General

Geography in Elementary and Secondary Education: Tradition to Opportunity, Vuicich G. Stoltman J., Research in Education (ERIC) 10 ED097243, Boulder, Colorado, 77 p., 1975.

The Geography of Education and Educational Planning, Ryba, R.H., Research in Education (ERIC), 09 ED087673, Summary of paper presented at the International Geographical Congress (22N D, Quebec), Symposium CA7, "Geography in Education," EDRS, 7 p., 1974. (non U.S.)

"Recent Trends in Geography and their Implications for Supervision of Instruction," P.O. Okunrotifa, The Social Studies, 65, pp. 307-10, December 1974.

"Geography in the Curriculum," H.J. Warman, The Educational Forum, 31, pp. 167-72, January 1967.

The Earth is the Home of Man A Study in the Foundations of Geography in the Curriculum, Dolphin Vernon Malcolm, (Ph.D. 1971, Harvard University), x1971, p. 195.

"Curriculum Planning for Geographic Education," G.S. Tomkins, Social Education, 31, pp. 621-4, November 1967.

"Scope of Geographic Study," H.G. Kariel, Journal of Geography, 66, pp. 150-4, April 1967.

Scope and Sequence of Geographic Education in the Modern School Curriculum Grades Four Through Twelve, Casper, Berenice M., (Ed.D. 1959, University of Nebraska).

"Dimensions of Geography in the School Curriculum," J.R. Borchert, Journal of Geography, 64, pp. 244-9, September 1965.

"Modern Geography Curriculums," C.F. Kohn and others, NEA Journal, 54, pp. 58-60, January 1965.

Integrating Disciplines

Contributions of the Discipline of Geography to the Social Studies, DeLeeuw, G., Research in Education (ERIC) 04 ED066380, 18 p. 1972.

History as an Integrative Discipline, Mattran, G.C.; Rader, W.D., Chicago University, Illinois, Research in Education (ERIC) 07 ED048139, 10 p., 1972.

Geography: An Integrative Discipline: K-6, 1969-70 Final Report, Santa Monica Unified School District, California, Research in Education (ERIC) 06 ED048053, 195 p., 1971.

Social Studies Teachers Perception of Topics in Geography, Bloomer, Francis Eldon, (Ph.D. 1971, The Ohio State University), 215 p., 32/07-A, p. 3549.

The Social Sciences and Geographic Education: A Reader, Ball, J.M. and others, John Wiley & Sons, Inc., New York, Research in Education (ERIC) 06 ED048092, 338 p., 1971.

"On the Interdisciplinary Approach to Geography," W.S. Nowak, Journal of Geography, 69, pp. 401-3, October 1970.

"Balanced Approach to Developing a Geography Curriculum," C.F. Kohn, Journal of Geography, 65, pp. 356-7, November 1966.

"Geographic Guidelines for Reconstructing the Social Studies Curriculum," M. Nishi, Journal of Geography, 65, pp. 328-31, October 1966.

"Geography's Role in General Education," R.A. Harper, Journal of Geography, 65, pp. 177-85, April 1966.

"Geography: Bridge Subject," M.G. Shaw, Minnesota Journal of Education, 46, pp. 23-4, January 1966.

"Geography: Separate Course or Integrated?" J.W. Morris, Journal of Geography, 64, pp. 202-5, May 1965.

"Geography and History as Integrating Disciplines," R.F. Shinn, Jr., Social Education, 28, pp. 395-400, November 1964. (Same cond. The Education Digest, 30, pp. 50-2, February 1965.)

"Geography as an Autonomous Discipline in the School Curriculum," N.V. Scarfe, Journal of Geography, 63, pp. 297-301, October 1964.

Relating Fields of Knowledge to Training for Social Intelligence, With Illustrations from Geography, Emry, June (Ph.D. 1937, University of Oregon) W1937, p. 70.

Knowledge-Structure

"Toward Structuring Geography: What Should be Memorized?" R.E. Schallert, Journal of Geography, 67, pp. 211-12, April 1968.

"Geography and the Organization of Knowledge," W.R. White, Journal of Geography, 66, pp. 496-9, December 1967.

"Geography Teaching and the Structure of the Discipline," H.J. Warman, Journal of Geography, 64, pp. 197-201, May 1965.

"What Knowledge is of Most Worth?" A.A. Bellack, The High School Journal, 48, pp. 318-32, February 1965.

"What Knowledge is of Most Worth?" A Reassessment, W. Van Til, The High School Journal, 48, pp. 333-9, February 1965.

"When Should Education Become Specialized?" R.W. Stadt, Catholic Education Review, 62, pp. 298-307, May 1964.

Concepts

"Geographic Concepts: A Need to be Explicit," L.E. Hudman, Journal of Geography, 71, pp. 520-5, December 1972.

Introducing New Concepts of Geography in the Social Studies Curriculum, Ball, J.M., Georgia University, Athens, Research in Education (ERIC) 06 ED048033, 54 p., 1971.

Concepts in the Social Studies, Beyer, B.K. and Penna, A.N., National Council for the Social Studies, Washington, D.C., Research in Education (ERIC) 06 ED049151, 101 p., 1971.

"On the Nature of Concepts," W. Imperatore, Journal of Geography, 69, pp. 173-8, March 1970.

"What Concepts and What Sequences?" M.C. Prunty, Journal of Geography, 65, pp. 300-1, October 1966.

The Disadvantaged

"Retarded Children and the Concepts of Distance and Direction," D.A. Lanegran and others, Journal of Geography, 69, pp. 157-60, March 1970.

"Geography Curriculum Project for the Disadvantaged Learner, K-6," University of Georgia, Athens, Grade Teacher, 87, p. 52, March 1970.

"Geographical Concepts and the Visually Handicapped," F.L. Franks and R.M. Baird, Exceptional Children, 38, pp. 321-4, December 1971.

"Measuring Geographical Concept Attainment in Visually Handicapped Students," F.L. Franks and C.Y. Nolan, Education of the Visually Handicapped, 3, pp. 11-17, March 1971.

"Development of Geographical Concepts in Blind Children," F.L. Franks and C.Y. Nolan, Education of the Visually Handicapped, 2, pp. 1-8, March 1970.

"Geography of Black America: The Growth of A Sub-Discipline," L.T. Lewis, Journal of Geography, 73, pp. 38-43, December 1974.

"Geography and the Black American: The White Papers and the Invisible Man," O.F. Donaldson, Journal of Geography, 70, pp. 138-49, March 1971.

The Effectiveness of Advance Organizers for Teaching Geography to Disadvantaged Rural Black Elementary Students, Steinbrink, J.E., Georgia University, Athens, Research in Education (ERIC) 05 ED041812, (Ed.D. Dissertation) 277 p., 1970.

Teaching the American Indian in the American School: An Adventure in Cultural Geography, National Council for Geographic Education, Research in Education (ERIC) 06 ED048952, 26 p., 1971.

Navajo Student Cognitive Aptitudes Related to a Geographical Concept of Acculturation Process, Long, Michael Thayne, (Ph.D. 1971, The University of New Mexico), x1971, p. 134.

"Geography and the American Indian," D.J. Ballas, Journal of Geography, 65, pp. 156-68, April 1966.

Scale-Distribution-Location

A Survey of Scale Concepts in Geographic Research, Doiron, Claude J., Jr., (Ph.D. 1972, University of Denver), 33/05, p. 2142B.

"Geographer's Strength: The Multiple Scale Approach," K.H. Stone, Journal of Geography, 71, pp. 354-62, September 1972.

"Location Theory," G. Krumme, National Council for the Social Studies. Yearbook, 40, pp. 3-37, 1970.

"Areal Distribution and Relationships," J.W. Morris, Journal of Geography, 69, pp. 198-203, April 1970.

"Increasing Significance of Relative Location," H.J. Warman, Journal of Geography, 66, pp. 478-80, December 1967.

Landscapes-Rural

"Landscape, Ecosystem, and Environmental Perception: Concepts in Cultural Geography," P.W. English, Journal of Geography, 67, pp. 198-205, April 1968.

"Design for the Teaching of Landform Geography," J.W. Pawling, Journal of Geography, 72, pp. 22-30, January 1973.

"How Do You Move the Mountain Into the Classroom?" R. Gray, NEA Journal, 55, pp. 34-6, March 1966.

"Landscapes from the Air," B.N. Floyd, Journal of Geography, 65, pp. 125-8, March 1966.

"Landforms in Relation to the Subject-Matter of Geography," R. Saveland, Journal of Geography, 64, pp. 417-21, December 1965.

Comparative Rural Landscapes: A Conceptual Geographic Model, Steinbrink, J.E., Georgia University, Athens, Research in Education (ERIC) 09 ED088767, 159 p., 1974.

"Selected Concepts in the Geographic Analysis of Rural Areas," J.F. Hart, Social Education, 30, pp. 607-9, December 1966.

Urban Geography

Metropolitan Spatial Injustice: An Alternative Approach to Instruction in Urban Geography, Hurst, M.E., Research in Education (ERIC) 09 ED081674, 45 p., 1974.

Metropolitan America: Geographic Perspectives and Teaching Strategies Swartz, R.D. and others, National Council for Geographic Education, Oak Park, Illinois, Research in Education (ERIC), 05 ED079165, 420 p., 1973.

"Some Current Concepts, Techniques, and Recent Findings in Urban Geography," A. Getis and J. Getis, Journal of Geography, 71, pp. 483-90, November 1972.

"Urban Geography and Elementary Social Studies; Papers from the Tri-University Project in Elementary Education," P. Bacon and A.S. Nichols, Journal of Geography, 68, pp. 267-306, May 1969.

Environmental Education

A New Role for Geographic Education: Values and Environmental Concerns, Do It This Way Series, Cole, R.A., National Council for Geographic Education, Research in Education (ERIC) 10 ED098138, 50 p., 1975.

Geography and Environmental Education-Why Aren't We Involved? Towler, J.O., Paper presented to the National Council for Geographic Education, Chicago, Illinois, Resources in Education (ERIC) 10 ED09925, 9 p., 1975.

Perspectives on Environment, Manners, I.R. and Mikesell, M.W., Association of American Geographers, Washington, D.C., Resources in Education (ERIC) 10 ED10206, 400 p., 1975.

"Children's Reasoning About Their Environment," D.M. Houghton and V. Morgan, Journal of Geography, 73, pp. 5-10, May 1974.

Ohio Environmental Education Areas, Melvin, R.W., Ohio Academy of Science, Columbus, Ohio, Research in Education (ERIC) 09 ED092386, 188 p., 1974.

Interrelationships Between Man and the Natural Environment for Use in the Geographic Strand of the Social Studies Curriculum, Douglass, Malcolm Paul, (Ed.D. 1954, Stanford University), 249 p., 14/12, p. 2237.

International Education

A Content Analysis of International Political Geography Concepts for use in the Social Studies, Carter, Alfred William, (Ed.D. 1974, University of Virginia), 35/04, p. 2117A.

"Geography and International Understanding," H.H. Gross, Instructor, 75, pp. 19+, April 1966.

Elementary

Instructional Objectives Exchange. Social Studies (Geography) Grade K-9, Instructional Objectives Exchange, Los Angeles, California, Research in Education (ERIC) 02 ED071928, 106 p., 1973.

"Geography in the Elementary Schools of the United States," H.J. Warman, Journal of Geography, 67, pp. 262-73, May 1968.

"Changing Aspects of Geography and the Elementary Curriculum," P. Bacon, Social Education, 31, pp. 609-11+, November 1967.

"Conceptual Model: A Guide to Elementary Geography Content," W. Imperatore, Journal of Geography, 66, pp. 414-16, November 1967.

Geography in the Elementary School Social Studies Program, Bemis, James Richard, (Ed.D. 1966, University of Southern California), 481 p., 27/04-A, p. 989.

"Geography in Elementary Social Studies," L. Kennamer, Instructor, 75, pp. 34-5, April 1966.

"Social Concepts for Early Childhood Education," V.P. Weaver, The Education Digest, 30, pp. 34-6, May 1965.

"Whither Elementary School Social Studies?" L.J. Allilunas, Education, 85, pp. 47-50, September 1964.

An Analysis of Four Aspects of Elementary Schools Geography, Baker, Emily H., (Ph.D. 1954, Saint Louis University), W1954, p. 222.

"Geography at the Kindergarten Level: Report of a Study," W. Imperatore, Journal of Geography, 70, pp. 296-302, May 1971.

"View from Above: Selected Primary Level Geographic Concepts and Map Skills," M.W. O'Kelley and J.L. Napp, Journal of Geography, 72, pp. 53-7, December 1973.

"Geographic Education: Principles and Practices in the Primary Grades,"
V. Arnsdorf, Social Education, 31, pp. 612-14, November 1967.

First Grade Social Studies Unit, Park Forest Public Schools District 163,
Illinois, Research in Education, (ERIC) 06 ED048035, 47 p., 1971.

Social Studies K-3: A Recommended Program, New York State Education Dept.,
Albany, Research in Education (ERIC) 06 ED048054, 64 p., 1971.

Social Studies, Grade 3, Teaching Systems I, New York State Education
Dept., Research in Education (ERIC) 06 ED048058, 63 p., 1971.

Social Studies, Grade 3, Teaching Systems II, New York State Education
Dept., Research in Education (ERIC) 06 ED048059, 78 p., 1971.

Social Studies, 4-6: A Recommended Program, New York State Education
Dept., Research in Education (ERIC) 06 ED048055, 125 p., 1971.

"Systematic Geography for Grade 4: A Spatial Systems Approach," J.E.
Steinbrink, Journal of Geography, 69, pp. 105-7, February 1970.

Teacher's Guide to the Fifth Grade Course on Regional Studies, Minnesota
University, Minneapolis, Research in Education (ERIC) 03 ED062226, 99 p.,
1972.

An Analysis of the Status of Geography Education in the Intermediate Grades
in a Tri-State Regional Area, Veltkamp, J.J., Ann Arbor, Michigan,
(Ed.D. South Dakota University), Research in Education (ERIC) 06 ED048085,
183 p., 1971.

"Developing Geography Concepts in the Intermediate Grades," D.W. Drummond,
Social Education, 30, pp. 628-31, December 1966.

Growth in Understanding of Geographic Terms in Grades IV to VII, Eskridge,
Thomas J., Jr., (Ph.D. 1937, Duke University), W1937, p. 65.

Knowledge of Important Principles of Physical Geography Possessed by
Selected Sixth-Grade Children, Brown, Daniel H., (Ed.D. 1963, Univer-
sity of Kansas) 133 p., 24/12, p. 5072.

Geography Education in the Junior High Schools of Kansas, Moreland, Edwin
Charles, (Ed.D. 1965, University of Northern Colorado), 155 p., 26/12,
p. 7118.

"An Ocean Geography for Children," Caruso, Mary L., (Ph.D. 1957, Columbia
University) x1957, p. 57.

Secondary

Integration of Black History with United States History and Urban Geog-
raphy with Modern Problems Census in the Secondary Schools of the
State of Maryland, Addy, James Arthur, (Ed.D. 1974, The George Wash-
ington University), 35/04, p. 1951A.

"New Trends in Secondary School Geography," W.M. Glowacki, The Social Studies, 64, pp. 131-4, March 1973.

Secondary School Geography-Its Relevancy to Black Students, Davis, George Arliss, (Ph.D. 1972, The Ohio State University), 167 p., 33/04A, p. 1315.

"Educational Objectives of High School Geography," N. Helburn, Journal of Geography, 67, pp. 274-81, May 1968.

"Instructor Project on World Geography," K.W. Froiseth, Instructor, 77, pp. 97-102, April 1968.

"Experimental Changes in High School Geography," J.A. Williams, Journal of Geography, 66, pp. 108-9, March 1967.

"Geography and the High School Social Science Curriculum," J.E. Schwartzberg, Schoolmens W. University Pa. Proceedings, 61, pp. 139-42, 1963.

The Selection of Geographic Generalizations for a World History and Geography Course in the Secondary School, Junge, Ruby M., (Ph.D. 1946, The University of Iowa), 229 p., W1946, p. 44.

College

Introductory Economic Geography: Problem-Solving or a Teaching Problem? Wheeler, J.O., Paper presented at the annual meeting of the National Council for Geographic Education (Chicago, Illinois), Research in Education (ERIC) 10 ED098114, 13 p., 1975.

"Sea: A Vital Part of Geographic Inquiry; College Courses in Marine Geography," T.A. Terich, Journal of Geography, 72, pp. 5-8, January 1973.

"Behavioral Objectives for College Geography: There is a Need," T.R. Lewis, Journal of Geography, 71, pp. 69-71, February 1972.

"Geography Programs in the Junior Colleges," W.F. Koch, Journal of Geography, 68, pp. 154-5, March 1969.

"Introductory Geography: The Topical Course," J.O.M. Broek, Journal of Geography, 66, pp. 348-9, October 1967.

"Graduate Programs in the Undergraduate College; The Arguments Against Turning a College into a University," J. Lachs, The Journal of Higher Education, 36, pp. 121-30, March 1965.

The Characteristics of Undergraduate Major Programs in Geography in Selected Colleges and Universities in the United States, Reiman, Robert Ellis, (Ph.D. 1964, The Florida State University), 177 p., 25/09, p. 5030.

Teaching Concepts of Climate in a Program of Geography at the College Level, Trevaskis Graham Arthur, (Ed.D. 1963, Columbia University), 229 p., 25/10, p. 5799.

Geography in General Education: Its Contribution in the Undergraduate General Education Programs of Selected American Colleges and Universities, Terry, Joseph E., (Ph.D. 1957, University of Denver), x1957, p. 59.

A Study of the Geography Course Offerings in a Selected Number of American Colleges and Universities for the College Year, 1949-50, Grove, Arthur M., (1952, University of Kentucky), p. 22.

CHAPTER 3. METHOD

General

Instructional Activities Series. Elementary and Secondary Sections, National Council for Geographic Education, Oak Park, Illinois, Research in Education (ERIC) 10 ED096345, 160 p., 1975.

"Use of Analogy as a Learning-Teaching Tool," R.F. Nelson, Journal of Geography, 74, pp. 83-6, February 1975.

"Geographic Methodology and Classroom Structures," L.E. Hudman, Journal of Geography, 71, pp. 349-53, September 1972.

Focus on Geography: Key Concepts and Teaching Strategies. 40th Yearbook, Bacon, P.E., National Council for the Social Studies, Washington, D.C., Research in Education (ERIC) 06 ED048042, 444 p., 1971.

Frontiers in Geographical Teaching. Second Edition, Chorley, R.J. and Haggett, P.E., New York, New York, Research in Education (ERIC) 06 ED042680, 401 p., 1971.

Affective Learning in Geography, Pemberton, Dixie Ann, (Ph.D. 1970, University of Kansas), 203 p., 31/11, p. 6689B.

"Analysis of Teaching Strategies in Emerging Geography Curricula," T. Kaltsounis, National Council for the Social Studies. Yearbook, 40, pp. 407-22, 1970.

"Helping Johnny to Like Geography," Sister Mary Julian, Catholic School Journal, 67, pp. 61-2, October 1967.

"Trends in Geography Instruction," R.C. Anderson, National Association of Secondary School Principals Bulletin, 51, pp. 10-19, February 1967.

"Introduction to the Classification of Climates," J.J. Hidore, Journal of Geography, 65, pp. 52-7, February 1966.

"Team Teaching of World Geography," E.G. Van Orman, and M.C. Van Orman, Journal of Geography, 65, pp. 67-72, February 1966.

"Unit Kernels on Learning to Think About Our Functioning World in Spatial Dimensions," M.L. Anderzhon, Instructor, 75, pp. 38-41+, April 1966.

Conceptual Clarification of Certain Geographic Terms Through the Use of Five Presentation Modes, Watts, Ann Rorem, (Ed.D. 1965, The University of Oklahoma), 100 p., 26/03, p. 1519.

"Geography and the Learning Process: A Methodological Review," R.D. Picker, Journal of Geography, 64, pp. 340-5, November 1965.

"Improvement of Instruction in Geography," L. Kennamer, Jr., Social Education 29, pp. 452-8, November 1965.

"Let's Help Each Other Teach Better," J.A. Williams and A.J. Brix, Ohio Schools, 43, pp. 23+, May 1965.

"Some Basic Considerations in Teaching Modern Geography," S.L. Arbital, H. Points, 46, pp. 55-9, December 1964.

Inquiry

Where is the Flowery Kingdom? Service center papers on Asian Studies, No. 6, Hantula, J., Columbus, Ohio, Resources in Education (ERIC) 10 ED10074, 47 p., 1975.

A Comparison of Directed Discovery and Demonstration Strategies for Teaching Geographic Concepts and Generalizations (Education, Curriculum Development), Lahnston, Anton T., (Ph.D. 1972, University of Washington), 33/08, p. 4064A.

"Incomplete Chain of Causation: Barrier to Problem-Solving," J.E. Chappell, Jr., Journal of Geography, 71, pp. 452-6, November 1972.

The Sample-Study: An Inquiry-Oriented, Case Study Approach in Geography Instruction, DeLeeuw, G.J., Texas University, Austin, Research in Education (ERIC) 05 ED040104, 30 p., 1970.

A Proposal for Adapting Discovery Learning in A Spiral Curriculum to the Teaching of Geography, Henzl, Elizabeth Mary, (Ed.D. 1969, Indiana University), 283 p., 30/11-A, p. 4854.

"Discovery Approach to Geography," L. Matthews, Tex. Outline, 53, p. 12, January 1969.

"Inquiry Approaches to Learning Concepts and Generalizations in Social Studies, C. Crabtree, Social Education, 30, pp. 407-11+, October 1966.

"Introducing Concepts from Cultural Geography Through Problem-Solving," R.C. Anderson, Journal of Geography, 67, pp. 29-35, January 1968.

"Use of the Question in Teaching Geography," W.B. Conroy, Journal of Geography, 66, pp. 489-91, December 1967.

"Thinking and Inquiry: Some Critical Issues; Instruction in the Elementary Grades," T.W. Parsons and F.R. Shaftel, National Council for the Social Studies. Yearbook, 37, pp. 123-66, 1967.

"Problems Approach to Geography," M.J. Bradbury, NEA Journal, 56, pp. 39-40, April 1967.

"Developing Problem-Solving Skills," J.B. Lindberg, Social Education, 30, pp. 645-8, December 1966.

Geographic Problem Solving Behavior of Eighth Grade Students in the Warren Beaty Junior High School, Connors, Robert E., (Ed.D. 1959, The Pennsylvania State University), 143 p., 20/08, p. 3221.

Models

The Reflective Method as a Model for Geographic Education, Ogren, Albert John, Jr., (Ph.D. 1974, The Ohio State University), 35/11, p. 7150A.

"Building and Using Inquiry Models in the Teaching of Geography," J.L. Hills, National Council for the Social Studies. Yearbook, 40, pp. 305-35, 1970.

"Time, Territory, and Man: A Geographic, Instructional Approach to Growth and Change in China," Clifton W. Pannell, Journal of Geography, 73, p. 7, October 1974.

"Teaching Model of Network Diffusion: The Taiwan Example," J.O. Wheeler, and C.W. Pannell, Journal of Geography, 72, pp. 21-31, May 1973.

"Geography of the New England-Atlantic Provinces-Quebec Region: A Model for Individualizing Instruction in the Upper Elementary Grades," B. Cuetara and others, Journal of Geography, 72, pp. 50-5, April 1973.

"Concept as a Teaching Device: The Example of Buffer Zones of Africa," J.M. Hunter and H.J. De Blij, Journal of Geography, 71, pp. 549-62, December 1972.

"Use of Theoretical Models in Geography Teaching," B.A. Johnson, Journal of Geography, 67, pp. 237-40, April 1968.

Field Work

"Geographical Expeditions: Field Work for the Elementary Grades," R.G. Boehm and J.B. Kracht, Journal of Geography, 73, pp. 7-12, September 1974.

"Brief Guide to the Sketching of Landscapes," W.G. Hamilton, Journal of Geography, 73, pp. 44-8, February 1974.

"Field Plan for Large-Scale Terrain Mapping," D.J. Stevens, Journal of Geography, 73, pp. 17-22, February 1974.

"Image Building in the Metro Centers: Some Implications," J.L. Dudding, Journal of Geography, 73, pp. 19-22, April 1974.

"Two-Week Field Course with Deferred Papers: A Possible Solution to the Problem of Undergraduate Field Work," W.A. Dando and J.W. Wiedel, Journal of Geography, 70, pp. 289-95, May 1971.

"Field Techniques in the Classroom: The Use of Color Slides for Field Observations of Occupance Features," M.D. Rafferty, Journal of Geography, 69, pp. 83-8, February 1970.

"Field Methods for Ninth Graders," L. King, Journal of Geography, 68, pp. 225-6, April 1969.

"Geography-ing or Doing Geography; An Inductive Approach to Teaching Geography," A.A. Clegg, Jr., Journal of Geography, 68, pp. 274-80, May 1969.

"Pros and Cons of a Field Geography Institute," B. Zakrzewska, Journal of Geography, 68, pp. 218-24, April 1969.

"College Town: An Urban Laboratory," G.L. McDermott, Journal of Geography, 67, pp. 134-7, March 1968.

"Geographic Field Study Techniques," J.H. O'Hern, Journal of Geography, 66, pp. 360-3, October 1967.

"Geography Means Field Study," Times (London) Educational Supplement, 2676, p. 430, September 1966.

"Field Trips and Fieldwork; Utilizing the Geographer's Natural Lab," B.F. Richason, Jr., Audiovisual Instruction, 11, pp. 361-5, May 1966.

Games-Simulation

The Effects of a Brief "Change-Agent Role-Playing" Procedure On College Geography Students Attitude and Behavior Toward Environmental Conservation Education, Horsley, Albert Doyme, (Ph.D. 1974, Southern Illinois University) 35/12, p. 7747A.

The Guide to Simulations/Games for Education and Training, Second Edition, Zuckerman, D.W. and Horn, R.E., Information Resources in Cambridge, Mass., Research in Education (ERIC) 02 ED072667, 501 p., 1973.

Transfer: An Intraurban Residential Migration Game, Rabiega, W.A., Research in Education (ERIC) 09 ED090121, 46 p., 1974.

Port Sivad: A Locational Decision Game for a Noxious Public Facility, Jakubs, J.F. and others, Research in Education (ERIC) 07 ED059110, 63 p., 1972.

The Effects of a Simulation Game on the Learning of Geographic Information at the Fifth-Grade Level (Education, Curriculum Development), Pierfy, David Arthur, (Ed.D. 1972, University of Georgia), 33/09, p. 4806A.

The Development and Evaluation of a Geographical Simulation Game Involving the Arkansas River Project, Croft, Jerry Don, (Ed.D. 1971, The University of Tulsa), 115 p., 32/07-A, p. 3553.

Simulation of the Urban Environment, Geographic Technical Paper Series, Kibel, B.M., Association of American Geographers, Washington, D.C. Commission on College Geography, Tempe, Arizona, Research in Education (ERIC) 04 ED064195, 131 p., 1972.

Use of Maps

"Reading Maps: A Much Needed Skill; Annotated Bibliography," A.R. Davis, Social Studies, 65, pp. 67-71, February 1974.

How to Introduce Maps and Globes: Grades One Through Six, How to do it Series, Number 15, Whipple, G., National Council for the Social Studies, Washington, D.C., Research in Education (ERIC) 09 ED083050, 8 p., 1974.

"Map Skills Instruction and the Child's Developing Cognitive Abilities," J.M.W. Meyer, Journal of Geography, 72, pp. 27-35, September 1973.

Mapping Unit: Maps for Here, There, Everywhere, Natoli, A. and others, Wellesley Public Schools, Mass., Research in Education (ERIC) 04 ED065382, 34 p., 1972.

Globes, Maps, Photographs: Geographic Tools, McDermott, P.D. and others, National Council for Geographic Education, Chicago, Illinois, Research in Education (ERIC) 07 ED049960, 71 p., 1972.

Using Maps and Globes, K-7. Revised, Virginia State Department of Education, Richmond, Research in Education (ERIC) 06 ED045541, 41 p., 1971.

"Geographer, the Teacher, and a Child's Perception of Maps and Mapping," H.A. Rushdoony, Journal of Geography, 70, pp. 429-33, October 1971; Reply, B.S. Bartz, 71, p. 68, February 1972.

"Usefulness of a Map with Geographic Text," O.L. Davis, Jr. and F.P. Hunkins, Journal of Geography, 67, pp. 362-6, September 1968.

"Who Can Find It on the Wall Map?" J.H. Edwards, Journal of Geography, 67, pp. 87-8, February 1968.

"Map Skills Development; Experiment in Memory Training Adaptable to Grades 4 To 8," A.G. Thompson, Catholic School Journal, 68, pp. 46-8, January 1968.

"Map Projection Exercises," E.J. Senninger, Jr., Journal of Geography, 66, pp. 183-5, April 1967.

"What You Need to Sharpen Map and Globe Skills, Grade Teacher 84, pp. 106-9+, October 1966.

"Teaching Map and Globe Skills," W.D. Pattison, Instructor, 75, p. 37, April 1966.

"Verbalization from Maps," E.B. Espenshade, Jr., Journal of Geography, 65, pp. 12-18, January 1966.

"Reading Maps," E. Moore, Claremont Reading Conference. Yearbook, 30, pp. 170-4, 1966.

"Visualizing the Sun-Angle at Various Latitudes," W.M. Glowacki, Journal of Geography, 64, pp. 396-7, December 1965.

"Distance and Direction Via Great Circle Routes," M.L. Anderzhon, Journal of Geography, 64, pp. 358-61, November 1965.

Developing Map Reading Skills and Geographic Understandings by Means of Conceptual Teaching Methods, Carmichael, Dennis R., (Ed.D. 1965, University of California, Berkeley), 221 p., 26/12, p. 176.

"Straight Line Isn't Always the Shortest Distance," P. Bacon, Grade Teacher 83, pp. 104-5+, October 1965.

"What's the Shape of Our World These Days?" P. Bacon, Grade Teacher, 83 pp. 80+, September 1965.

"Teaching Social Studies with Map-Overlays," V. Arnsdorf, California Journal of Educational Research, 16, pp. 65-74, March 1965.

"Where On Earth Do You Think You Are, In Terms of Longitude and Latitude?" P. Bacon, Grade Teacher 82, pp. 54-5+, February 1965.

"Way to Teach Children to Use the Globe," P. Bacon, Grade Teacher, 82. pp. 66-7, October 1964.

The Effect of Specific Training in Vocabulary. The Reading of Maps, Graphs, and Tables, and Organization on Achievement in Geography, French, Lloyd Charles, (Ph.D. 1932, University of Pittsburgh) S0178.

Media

Multimedia on Multimedia: Educational Environments, Hurst, M.E. and Hoskins, M., Paper presented at the Association of American Geographers Conference, April, 1973 EDRS, Research in Education (ERIC), 09 ED081673, 7 p., 1974.

Instructional Effectiveness of Two Types of Visual Illustrations in Facilitating Specific Geographic Learning at the College Level, Scull, C. Robert, (Ed.D. 1974, The Pennsylvania State University), 35/11, p. 7038A.

Recorded Visual Instruction, 1973 Edition, Nebraska University, Lincoln, Research in Education (ERIC) 02 ED070263, 171 p., 1973.

1972 Recorded Instruction for Television, Nebraska University, Lincoln, Research in Education (ERIC) 09 ED056468, 184 p., 1972.

A Demonstration Project of Programmed Television Instruction, Komoski, P.K., Columbia University, New York, Research in Education (ERIC) 09 ED011066, 193 p., 1967.

"Geographic Inquiry in the Elementary School Via ETV," R.S. Craddock and V. Arnsdorf, Journal of Geography, 70, pp. 269-75, May 1971.

An Investigation of the Improvement of Educational Filmstrips and a Derivation of Principles Relating to the Effectiveness of These Media--Study II, Vandermeer, A., Pennsylvania State University, Research Reports (ERIC) ED003534, 154 p.

An Investigation of the Effect of Teaching Interpretation of Geographic Photographs to Sixth Graders, Belgium, Loretta Elaine, (Ed.D. 1967, University of California, Berkeley), 135 p., 29/01-A, p. 53.

"Multi-Media Approach Makes the Elusive Come Alive," C.F. Kohn, Grade Teacher 83, pp. 89+, October 1965.

A Study of Geographic and Related Physical Science Concepts and Understandings Attainable Through the Media of School Radio Communication, Usian, David Theodore, (Ed.D. 1964, University of California, Los Angeles), 165 p., 25/10, p. 5800.

The Effectiveness of Co-ordinated Filmstrips in Geography, McCarthy, M. Clare, (Ph.D., 1949, University of California, Berkeley), 229 p., W1949, p. 110.

Individualized Learning

"Computer-Based Instructional System on Maps; State University College of New York at Oneonta," P.R. Baumann, Journal of Geography, 74, pp. 159-66, March 1975.

"Unit Mastery Learning in an Introductory Geography Course," J.R. Healy and L.K. Stephenson, Journal of Geography, 74, pp. 25-31, January 1975.

Mastery Learning and Geography; Effects Upon Achievement, Retention, and Time-To-Completion, Jones, F.G., Paper presented at the Annual Meeting of the College and University Faculty of the National Council for the Social Studies, Chicago, Illinois, November 1974, Resources in Education (ERIC) i0 ED09928, 21 p., 1975.

Improving Interactive Capabilities in Computer-Assisted Instruction, Semi-Annual Technical Report for Six Months Ending July 31, 1973, Collins, A.M. and others, Cambridge, Mass., Research in Education (ERIC) 09 ED084789, 57 p., 1974.

Analysis and Synthesis of Tutorial Dialogues, Semi-Annual Technical Report Number Two, Collins, A. and others, Cambridge, Mass., Research in Education (ERIC) 09 ED088512, 92 p., 1974.

"Individualized Learning in an Open Geography Classroom," B.S. Meierding, Journal of Geography, 72, pp. 31-4, December 1973.

"Geographic Audio-Visual-Tutorial Work in Small Schools: The Barron County Experience," H.T. Loomer, Jr., Journal of Geography, 72, pp. 58-60, November 1973.

Computerized Instruction in Undergraduate Geography, Fielding, G.J. and Ramage, K.W., Association of American Geographers, Washington, D.C., Commission on College Geography, Research in Education (ERIC) 01 ED066858, 83 p., 1973.

Computer Aided Instruction in Teaching Thematic Mapping, Baumann, P.R., Paper presented at the Conference on Computers in the Undergraduate Curricula (Claremont, California), Research in Education (ERIC) 05 ED079997, 4 p., 1973.

The Teaching of a College Level Physical Geography Earth Science Course by an Audio-Visual Tutorial Independent Study Method: An Evaluation, Lyon, Edward Ellsworth, (Ph.D. 1972, The Ohio State University), 261 p., 33/04-A, p. 1591.

- Developmental Efforts in Individualized Learning, Weisgerber, R.A., Itasca, Illinois, Research in Education (ERIC) 06 ED052612, 361 p., 1971.
- "Achievement and Retention as Variables in Comparing Programmed and Conventional Instructions in Geography," P.O. Okunrotifa, Educational Leadership, 28, pp. 501-8+, February 1971.
- Geography Via the Audio-Visual-Tutorial Method, Richason, B.F., National Council for Geographic Education, Chicago, Illinois, Research in Education (ERIC) 5 (04) ED034434, 44 p., 1970.
- Computer Assisted Instruction in Geography, Commission on College Geography, Technical Paper Number 2, Washington, D.C., Research in Education, (ERIC) 5 (03) ED033586, 163 p., 1970.
- "Study of the Use of a Programmed Geography Unit: Rate of Learning," S.D. Aven and others, California Journal of Educational Research, 21, pp. 64-7, March 1970.
- "Achievement Via Programmed Instruction and Socioeconomic Status," A. Herr, and S. Tobias, Psychology in the Schools, 7, pp. 53-6, January 1970.
- "Programmed Learning: Its Relationship to Geographical Education," R.Y. Gildea, Jr., Journal of Geography, 67, pp. 541-4, December 1968.
- "Teacher Inclusion in a Programmed Instructional Sequence Involving Social Studies Content," F.L. Ryan, Educational Research (British), 62, pp. 53-7, October 1968.
- A Comparative Analysis of Attitudes of Students Taught Introductory College Geography by Closed-Circuit Television and The Classroom Discussion Method, Sims, Joe Venton, (Ed.D. 1968, The University of Oklahoma), TT3 p., 29/10-A, p. 3347.
- Self-Direction in Programmed Geography Instruction, Bivens, L.W. and Campbell, V.N., American Institute for Research in Behavioral Sciences, Palo Alto, California, Research in Education (ERIC) 3 (05) ED014915, 24 p., 1968.
- "Gain in Programmed and Flexible Presentations," F.A. Rodgers, The Elementary School Journal, 68, pp. 312-24, March 1968.
- "Utilizing the Audio-Tutorial Approach," R. Beckman and others, Journal of Geography, 66, pp. 241-5, May 1967.
- The Effects of Variations in Sequencing Programmed Instruction in Secondary School Geography, Fraenkel, Jack Runnels, (Ph.D. 1966, Stanford University) 166 p., 27/07-A, p. 2097.
- "Geography Via Programmed Instruction," S.M. Shafer, Journal of Geography, 64, pp. 77-81, February 1965.

A Programmed Presentation of Certain Elements of Geography for the Intermediate Grades, Bugman, Ruth Christine, (Ed.D. 1965, Columbia University), 172 p., 26/08, p. 4563.

An Experimental Study of Programmed Instruction in a College Physical Geography Course, Loar, Dorothy Marie Cronin, (Ph.D. 1965, Fordham University), 233 p., 26/07, p. 3770.

"Programmed Textual Material as a Partial Substitute for Teacher-Led Classroom Procedures in Geography," L.A. Wood, The Journal of Educational Research, 58, pp. 22-6, September 1964.

Programmed Textual Material as a Partial Substitute for Teacher-Led Classroom Procedures in Geography, Wood, Leslie Alfred (Ed.D. 1962, Stanford University), 164 p., 23/06, p. 2037.

Elementary

"Improving Elementary Geography," M.J. Rice, The Elementary School Journal, 66, pp. 126-38, December 1965.

A Method of Directing Children's Study of Geography, Reeder, Edwin Hewett, (Ph.D. 1926, Columbia University), 98 p., L1925, p. 111.

"Variables Affecting a Geographic Concept-Learning Task for Pre-School Children," P.H. Martorella and R.L. Wood, Journal of Geography, 70, pp. 551-4, December 1971.

"Two Studies in Learning Geography: Implications for the Primary Grades," J.R. Lee and N. Stampfer, Social Education, 30, pp. 627-8, December 1966.

"Concept and Skill Development in a Primary Geography Unit Utilizing Alternate Learning Progressions," A.K. Ellis, Journal of Geography, 73, pp. 20-6, September 1974.

A Study of Fourth-Grade Productive Thinking Instruction in Two Content Areas: Language Arts and Geography, Fitzgerald, Catherine Joan, (Ed.D. 1972, Columbia University), 148 p., 32/12-A, p. 6849.

The Improvement of Reading and Reading-Study Skills in Grades Seven and Eight Through English, History, Geography, and Science, Zepp, George Daniel, (Ed.D. 1963, University of Maryland), 320 p., 26/01, p. 218.

Secondary

The Effect of Three Instructional Designs Small Group, Peer-Teaching and Independent Study on Ninth Grade Geography Students Ability to Think Critically, Wilson, Joe Wayne, (Ed.D. 1972, University of Idaho), 98 p., 33/05-A, p. 2000.

"Relationship of Cognitive Style and Method of Instruction to Performance in Ninth Grade Geography," T.D. Grieve and J.K. Davis, The Journal of Educational Research, 65, pp. 137-41, November 1971.

College

The Development of and an Approach to a College Introductory Geography Systems Teaching Model, Hudman, Lloyd E., (Ph.D. 1970, University of Kansas), 159 p., 31/11-B, p. 6684.

"Examples of Student Research in Introductory Economic Geography," H. Brodsky, Journal of Geography, 68, pp. 358-61, September 1969.

"Inductive Conceptual Approach to College Geography," A.H. Meyer, Journal of Geography, 66, pp. 492-5, December 1967.

The Social Conscience Goal and Instructional Procedures in the Basic College Geography Course, Noxon, Charles Jay (Ed.D. 1963, University of Virginia) 159 p., 24/06, p. 2383.

A Case Study Technique for Studying Manufacturing in a College Course in Economic Geography, Multhauf, Delmar Charles, (Ph.D. 1959, Columbia University), x1959, p. 75.

Directed Exercises in the Political Geography of Europe and the Near East, Ramsaur, Robert T., (Ph.D. 1955, Columbia University), 105 p., W1955, p. 187.

Directed Studies in Introductory College Geography, Brooks, Hugh C., (Ph.D. 1954, Columbia University), W1954, p. 190.

CHAPTER 4. MATERIALS

General

Dissemination Recommendations on and Descriptions of Exemplary Products, Panel Review of Products (PROP), 1972-73, Walton, W.W., and others, Princeton, New Jersey, Research in Education (ERIC) 09 ED083292, 103 p., 1974.

A Bibliography of Paperback Books Relating to Geography, Hornstein, H.A., National Council for Geographic Education, Chicago, Illinois, Research in Education (ERIC) 07 ED059138, 54 p., 1972.

The Contribution of Selected Teaching Materials Towards the Understanding of Geographic Concepts and Generalizations, Thomas, Eric Hubert Gwynne, (Ed.D. 1965, Stanford University), 186 p., 26/11, p. 6641.

"Objectivity Statistics: The Hythergraph," P.V. Greco, Journal of Geography, 64, pp. 205-11, May 1965.

"Instructional Patterns and Materials in the Teaching of Geography," W.E. Gandy, Journal of Geography, 64, pp. 72-7, February 1965.

Analyses of Textbooks

"Use of Geography Textbooks," P.O. Okunrotifa, Improving College and University Teaching, 18, pp. 294-6, Autumn 1970.

The Treatment of Latin America in Social Studies Instructional Materials, Bulletin No. 5, Gill, C.C. and Conroy, W.B., Texas University, Austin, Research in Education (ERIC) 4 (02) ED022781, 46 p., 1969.

A Study of the Presentation and Reinforcement of Geographic Concepts Found in Selected Geography Textbooks in Adoption in the State of Texas During 1964-65, Schomburg, Carl Edward, (Ed.D. 1966, University of Houston), 245 p., 27/09-A, p. 2752.

"Improving Elementary Geography: Textbooks," M.J. Rice, Elementary School Journal, 66, pp. 130-4, December 1965.

Comparative Study of Geography and Social Studies Textbooks to Determine the Relative Emphasis Placed Upon the Geographic Point of View, Mensoian, Michael George, Jr., (Ph.D. 1962, The University of Connecticut) 131 p., 23/05, p. 1626.

Geography in American Schools, 1892-1935. Textbooks and Reports of National Committees, Stowers, Dewey Marion, Jr., (Ed.D. 1962, Duke University), 238 p., 23/01, p. 146.

An Analysis of Economic Geography Textbooks From 1891 Through 1956, Cadugan, William Hayden, (Ed.D. 1958, University of Pittsburgh), 201 p., 19/01, p. 81.

- Historical Survey of the Religious Content of American Geography Textbooks from 1784 to 1895, Wilson, Karl K., (Ph.D. 1951, University of Pittsburgh), 134 p., W1951, p. 189.
- Mathematical Geography in American School Textbooks, Rice, Hugh Smith, (Ph.D. 1950, Columbia University), 186 p., 11/03, p. 601.
- The Development of American Geography Textbooks from 1840 to 1890, Culler, Ned, (Ph.D. 1946, University of Pittsburgh), 399 p., W1946, p. 48.
- An Analysis of Early American Geography Textbooks from 1784 to 1840, Sahli, John Rankin, (Ph.D. 1941, University of Pittsburgh), 381 p., W1941, p. 96.
- Trends of Methods, Contents and Beliefs in Geography Textbooks, 1784-1895, Storst, Cyril L., (Ph.D. 1937, George Peabody).
- A Study of the Vocabulary Load of Geography of Many Lands, An Alabama State Adopted Text for the Fourth Grade, Berry, Mary Tom, (Ph.D. 1961, The University of Alabama) 284 p., 22/05, p. 1517.
- An Investigation of the Readability of Recently Published History and Geography Textbooks and Related Materials for the Fourth Grade, Smith, Ruth I., (Ph.D. 1951, University of Pittsburgh), 134 p., W1951, p. 188.
- Repetition, Spread, and Meanings of Unusual, Difficult, and Technical Terms in Fourth Grade Geography Texts, Ritter, Olive Pearl, (Ph.D. 1941, The University of Iowa), 28 p., W1941, p. 90.
- Comprehension of Geography Textbooks by Fourth Grade Children, Wallace, Clara, M., (Ph.D. 1941, The University of Iowa), 28 p., W1941, p. 90.
- The Utility of Phonic Generalizations in their Application to the History and Geography Vocabularies in Certain Specified Textbooks Adopted for Grades Four, Five, and Six, Parker, Jesse Joe, (Ph.D. 1968, The Louisiana State University & Agricultural and Mechanical College), 115 p., 29/05-A, p. 1372.
- A Study of Vocabulary Load and Social Concept Burden of Fifth and Sixth Grade Social Studies, History, and Geography Textbooks, Haffner, Hyman, (Ph.D. 1959, University of Pittsburgh), 158 p., 20/11, p. 4311.
- A Critical Analysis of Political Concepts in Sixth Grade Geography Textbooks, High, Lois Ann, (Ed.D. 1968, Baylor University), 168 p., 29/05-A, p. 1363.
- An Analysis of Current Social Studies Texts, Grades Seven Through Twelve, in Terms of Inclusion of Geographic Generalizations, Langhans, Elizabeth Jeremy, (Ed.D. 1961, University of Colorado), 147 p., 22/09, p. 3043.
- The Geographic Parameters of a Textbook Message: A Study of Geographic Information Contained in High School American History Textbooks, Ostapchuk, William John, (Ed.D. 1972, University of Maine), 151 p., 34/02, p. 517A.
- An Analysis of Selected Civic Attitudes in High School American History, Geography, and Civics Textbooks, 1885-1914, Bechtel, Donald Leon, (Ed.D. 1968, University of South Dakota), 277 p., 29/09-A, p. 2972.

Textbooks, Determinism and Turner, The Westward Movement in Secondary School History and Geography Textbooks, 1830-1960, Littlefield, Henry Miller, (Ph.D. 1967, Columbia University), 462 p., 28/12-A, p. 4886.

Visuals

"Comparisons of Conventional Subdued to Vivid Highly Contrasting Color Schemes for Elementary School Maps: Report of an Experiment," J.W. Miller, Journal of Geography, 73, pp. 41-5, March 1974.

"Pictography Symbols in Cartography: A Study of Efficiency in Map Reading," John Kilcoyne, University of Washington, 1973, microfilmed.

"A Study of Symbol Design for Elementary School Maps," William F. Phillips, University of Kansas, 1973, microfilmed.

The Effects of Graphic Roles on Learning Geography Materials in the Middle Grades, Pelletti, John Charles, (Ed.D. 1973, The University of Georgia) 34/09, p. 5597A.

A Study of Selected Variables Involved in the Use of Illustrations with a Geographic Text (Education, General), King, Franklin Lafayette, (Ed.D. 1972, East Texas State University) 33/08, p. 3958A.

Cartographic Symbolism and Very Young Children, Giffard, E.O., Research in Education (ERIC) 03 ED062238, 22 p., 1972.

The Image-Accumulation Technique as a Variable in Multiple-Image Communication, Tam, P.T. and Reeve, R.H., Indiana State University, Terre Haute, Research in Education (ERIC) 06 ED048734, 44 p., 1971.

"Still Picture in Geography Instruction," P.F. Griffin and R.L. Chatham, Audiovisual Instruction, 11, pp. 355-60, May 1966.

"Slides: A Teaching Aid in Geography," W.R. White, Audiovisual Instruction, 11, pp. 352-4, May 1966.

"Coordinated Printed Visual," R. Beckman and G. Tanner, Audiovisual Instruction, 11, pp. 366-8, May 1966.

Humanities-Bilingual Materials

A View of the American Past for Grades 5 to 8 Through the Study of Workers and their Folksongs in Selected Occupations: An Historical and Selective Compilation of a Teachers Handbook of Materials for the Teaching of United States History and Geography, Seidman, Laurence Ivan, (Ed.D. 1969, New York University), 640 p., 30/08-A, p. 3202.

An Experimental Study Correlating Music with the Teaching of Geography in the Sixth Grade, Hallquist, Robert Nels, (Ed.D. 1968, The University of Mississippi), 148 p., 29/10-A, p. 3523.

Orientation to the Humanities, Part I, Off to Rome, Dade County Public Schools, Miami, Florida, Research in Education (ERIC) 09 ED084925, 16 p., 1974.

"Development of a Concept Cluster with Eight-Year-Old Children Whose Second Language is English," J.D. McAulay and J. Johnson, Education, 92, pp. 56-65, February 1972.

The Heritage and Contributions of the Hispanic American, Teacher's Edition, Denver Public Schools, Colorado, Research in Education (ERIC) 06 ED048031, 51 p., 1971.

Viva Nuestra Amistad IV: Spanish Activity Packet (Long Live Our Friendship), Cobb, H., Atlanta Public Schools, Research in Education (ERIC) 09 ED085997, 1974.

Materiales En Marcha Para El Esfuerzo Bilingue--Bicultural (Materials on the March for the Promotion of Bilingualism/Biculturalism), December 1972, San Diego City Schools, California, Research in Education (ERIC) 03 ED073726, 24 p., 1973.

State Geographies

Geography of the State of Arizona, Renner, George T. III, (Ph.D. 1955, Columbia University), 105 p., W1955, p. 187.

Geography of Florida, Chauvin, Robert S., (Ph.D. 1956, Columbia University), X1956, p. 101.

A Geography of Missouri for Fourth and Fifth Grades, Saveland, Robert N., (Ed.D. 1952, Columbia University), W1953, p. 196.

Elementary

Georgia Geography Curriculum Project

Earth: Man's Home, Imperatore, W., Georgia University, Athens, Research in Education (ERIC) 09 ED093734, 215 p., 1974.

Place and Environment, Imperatore, W., Georgia University, Research in Education (ERIC) 06 ED043550, 177 p., 1971.

Resource and Production, Imperatore, W., Georgia University, Athens, Research in Education (ERIC) 09 ED093735, 199 p., 1974.

Comparative Rural Landscapes: A Conceptual Model, Steinbrink, J.E., Georgia University, Athens, Geography Curriculum Project, 159 p., 1974.

Population Growth in the United States and Mexico, Dale, J.R. and Rice, M.J., Georgia University, Athens, Research in Education (ERIC) 09 ED093733, 105 p., 1974.

Black Population Distribution and Growth in the United States, Pelletti, J.C., Georgia University, Athens, Geography Curriculum Project, Research in Education (ERIC) 09 ED093732, 218 p., 1974.

Functions of Cities, Student Text and Student Workbook, Jones, F.G., Georgia University, Athens, Research in Education (ERIC) 10 ED096197, 200 p., 1975.

Transportation and the Environment, Fagan, J.S., Georgia University, Athens, 145 p., 1974.

Minnesota Project Social Studies

The United States: An Overview, Grade Five (Unit I), Minnesota University, Research in Education (ERIC) 01 ED069564, 189 p., 1973.

The Midwest, Grade Five (Unit II), Minnesota University, Research in Education (ERIC) 01 ED069565, 380 p., 1973.

The Northeast--Case Study on New York City, The Northeast as a Region, Grade Five (Unit III), Research in Education (ERIC) 01 ED069563, 142 p., 1973.

The South: Birmingham Case Study, and the South as a Region, Grade Five (Unit IV), Minnesota University, Research in Education (ERIC) 01 ED069562, 69 p., 1973.

The West, Grade Five (Unit V), Minnesota University, Research in Education (ERIC) 01 ED069568, 41 p., 1973.

Canada, Grade Five (Unit 6), Minnesota University, Research in Education (ERIC) 01 ED069567, 140 p., 1973.

Latin America: Introduction and Summary, Grade Five, (Unit 7), Minnesota University, Research in Education (ERIC) 01 ED069566, 372 p., 1973.

Secondary

Western Europe: Introduction and Geography, Grade Eleven, Resource Unit I, Sub Unit 1, Minnesota University, Project Social Studies, Research in Education (ERIC) 09 ED083094, 61 p., 1974.

The U.S.S.R.: Introduction and Sub Unit on Geography, Grade Eleven, Minnesota University, Research in Education (ERIC) 09 ED083097, 97 p., 1974.

Man and His Physical Environment: Teacher's Manual, Mank, E.R., Illinois University, Research in Education (ERIC) 09 ED088722, 130 p., 1974.

The Atlantic Canada-New England Region and Environment, Maine University, Research in Education (ERIC) 05 ED080439, 25 p., 1973.

Selected References for Earth Science Courses, Matthews, W.H., Earth Science Curriculum Project, Boulder, Colorado, Research in Education (ERIC) 3 (10) ED019219, 1968.

An Outline for Teaching Conservation High Schools, Department of Agriculture, Washington, D.C., Research in Education (ERIC) 3 (08) ED017377, 23 p., 1968.

The Essentials of Geography: A One Semester Textbook in the Fundamentals of Human Geography, Novak, Robert T., (Ph.D. 1957, Columbia University) X1957, p. 58.

High School Geography Project

The Role of the High School Geography Project in Geographic Education Reform Worldwide, Gunn, A.M., Research in Education (ERIC) 10 ED096220, 5 p., 1975.

High School Geography Project: From Boulder to Boondocks, Geib, R.D., A research paper submitted to the Department of Geography, Western Michigan University, Research in Education (ERIC) 10 ED096201, 54 p., 1975.

Selected Classroom Experiences: High School Geography Project, Geographic Education Series Number 4, Kohn, C.F., National Council for Geographic Education, Oak Park, Illinois, Research in Education (ERIC) 10 ED096184, 70 p., 1975.

Diffusion Strategies in High School Geography, The Indiana Social Studies Quarterly, Ball State University, Muncie, Indiana, Research in Education (ERIC) 10 ED096242, 58 p., 1975.

Using Evaluation to Improve Instruction: Instructor's Guide and Participant's Manual, Richburg, R.W., Teaching Procedures for the New Social Studies, Boulder, Colorado, Research in Education (ERIC) 10 ED096187, 105 p., 1975.

Using Simulation to Involve Students: Instructor's Guide and Participant's Manual, Kurfman, D.G. and Phillips, I.M., Association of American Geographers, Washington, D.C., Research in Education (ERIC) 10 ED096186, 83 p., 1975.

From Geographic Discipline to Inquiring Student, Patton, D.J. and others, The High School Geography Project, Final Report, Association of American Geographers, Research in Education (ERIC) 09 ED087676, 108 p., 1974.

An Analysis of the High School Geography Curriculum Project in Illinois Public Secondary Schools, Jetes, Teddy Leroy, (Ph.D. 1974, Southern Illinois University), 35/12, p. 7612A.

"Rationale Behind High School Geography Project: An Outsider's Interpretation," C. Marsh, *Journal of Geography*, 72, pp. 37-40, May 1973.
Reply, J.E. Orr, 72, pp. 4-6, November 1973.

- The Local Community: A Handbook for Teachers, High School Geography Project, Boulder, Colorado, New York, McMillan Company, Research in Education (ERIC) 09 ED056940, 229 p., 1972.
- Activities Selected from the High School Geography Project, Natoli, S.J. and others, Association of American Geographers, Washington, D.C., National Council for Geographic Education, Research in Education (ERIC) 09 ED054991, 353 p., 1972.
- High School Geography Project Teacher Education Kits, Evaluation Reports, Research in Education (ERIC) 09 ED054980, 7 p., 1972.
- "High School Geography Project, Geography in an Urban Age," R.B. Pratt, Social Education, 36, pp. 750-2, November 1972.
- Discovering Decision Trees in the Curriculum Jungle: A Chronicle of Group Groping, Helburn, N., Western Michigan University, Kalamazoo, Research in Education (ERIC) 06 ED045533, 16 p., 1971.
- A Historical Analysis of the High School Geography Project as a Study in Curriculum Development, Pratt, Robert Bruce, (Ed.D. 1970, University of Colorado), 272 p., 31/09-A, p. 4390.
- An Analysis of Inquiry Oriented High School Geography Project Urban Materials, Womack, James Alonzo, (Ph.D. 1969, United States International University), 160 p., 30/09-A, p. 3869.
- "On the Process of Curriculum Reform: Political Unit of the High School Geography Project," R.E. Kasperson, Journal of Geography, 66, pp. 286-93, September 1967.
- "New Materials and Teaching Strategies: The High School Geography Project," N. Helburn, The National Association of Secondary School Principles, Bulletin, 51, pp. 20-9, February 1967.
- "Limited School Trials of the High School Geography Project, 1965-66," G. Vuicich, Journal of Geography, 65, pp. 29-32, January 1966.
- An Investigation of Students' Attitudes Toward Geography Through the Use of the Strategies of the High School Geography Project (HSGP) at the College Level, Daniels, William Davis, (Ph.D. 1974, University of Maryland), 35/09, p. 5672A.
- "Strategies of the High School Geography Project for the Colleges: A New Heresy," A.D. Hill, Journal of Geography, 69, pp. 544-51, December 1970.

College

- Master's Theses in Geography: American and Canadian Universities, A Bibliography, Stuart, M.M., Research in Education (ERIC) 09 ED095087, 275 p., 1974.

Introductory College Geography Textbooks, 1940-1965: A Bibliographical Summary, Bergen, J.V., Illinois State University, Normal, Illinois, Research in Education (ERIC) 07 ED059140, 29 p., 1972.

An Investigation into the Relative Values of Wall Maps and Desk Atlases in the Teaching of Geography at the College Level, Fluitt, John Loy, (Ph.D. 1967, University of Southern Mississippi), 28/09-A, p. 3553.

A Method of Selecting and Evaluating Materials for a Course in Introductory Geography for Teachers' College Students, Lackey, Earl E. (Ph.D. 1933, Columbia University), 125 p., S0054.

Commission on College Geography

Introductory Geography: Viewpoints and Themes, Publication No. 5, Association of American Geographers, Washington, D.C., Commission on College Geography, Research in Education (ERIC) 09 ED081703, 116 p., 1974.

Challenge and Change in College Geography, Helburn, N.E. Association of American Geographers, Washington, D.C., Commission on College Geography, Research in Education (ERIC) 01 ED067326, 116 p., 1973.

The Interface as a Working Environment: A Purpose for Physical Geography, Geographic Technical Paper Series, Carter, D.B. and others, Association of American Geographers, Washington, D.C., Commission on College Geography, Research in Education (ERIC) 04 ED064194, 59 p., 1972.

Geography in the Two-Year Colleges, Association of American Geographers, Washington, D.C., Commission on College Geography, Arizona State University, Tempe, Arizona, Research in Education (ERIC) 06 ED045486, 92 p., 1971.

A Summary of the Activities of the Commission on College Geography, Association of American Geographers, Arizona State University, Tempe, Arizona, Research in Education (ERIC) 06 ED051037, 5 p., 1971.

CHAPTER 5. EVALUATION

General

Geographical Data Conceptualization: An Approach to Student Understanding, Margulis, H.L., Paper presented at the Annual Convention, National Council for Geographic Education, Milwaukee, 1972, Research in Education (ERIC) 05 ED077799, 12 p., 1973.

"Establishment of the Validities of Experimental Materials in Geography," P.O. Okunrotifa, Journal of Geography, 72, pp. 26-34, October 1973.

"Measuring Human Extensibility in a Shrinking World," D.G. Janelle, Journal of Geography, 72, pp. 8-15, May 1973.

Evaluation in Geographic Education, Kurfman, D.G., National Council for Geographic Education, Research in Education (ERIC) 06 ED049098, 169 p., 1971.

Perceptual Agreement of Social Studies Teachers and Professional Geographers on Aspects of a Cognitive Geographic Paradigm, Peters, William, (Ph.D. 1969, University of Minnesota), 176 p., 31/03-A, p. 937.

"Improving the New Geography Through Evaluation," D. Kurfman, National Association of Secondary School Principals, Bulletin, 61, pp. 37-43, February 1967.

"Summary of Educational Media Evaluation of NDEA Geography Institutes, Summer 1965," G. Tanner, Audiovisual Instruction, 11, pp. 369-70, May 1966.

The Comparison of Two Programs for Supervision in the Field of Geography, Shyrock, Clara May, (Ph.D. 1943, University of Pittsburgh), W1943, p. 75.

Course Evaluation

"Monitoring: A Method of Diagnostic Course Evaluation," L.D. Fink, Journal of Geography, 72, pp. 16-20, May 1973.

The Application of Item Sampling Procedures to the Evaluation of An Innovative Geography Curriculum, Richburg, Robert Williams, (Ph.D. 1971, University of Colorado), 153 p., 32/10-A, p. 5676.

Evaluating Geography Courses: A Model with Illustrative Applications, Hastings, J.T. and others, Association of American Geographers, Washington, D.C., Illinois University, Urbana, Research in Education (ERIC) 06 ED045505, 83 p., 1971.

Using Questionnaire Data to Revise Curriculum Materials, Kurfman, D.G., Research in Education (ERIC) 05 ED041933, 6 p., 1970.

An Inquiry into the Kind of Geography Being Learned in Grades 3-12,
Slater, Frances Ann, (Ph.D. 1969, The University of Iowa), 164 p.,
30/02B, p. 705.

Instructional Systems Development, A Demonstration and Evaluation Project,
Final Report, Barson, J., Michigan State University, East Lansing,
Research in Education (ERIC) 3 (12) ED020673, 125 p., 1968.

Achievement Tests

"Effects on Social Studies Achievement of Multiple Student Responding
to Different Levels of Questioning," F.L. Ryan, The Journal of
Experimental Education, 42, pp. 71-5, Summer 1974.

Using Comprehensive Achievement Monitoring in the Classroom, Symposium,
California Educational Research Association, San Jose, California,
1972, Research in Education (ERIC) 09 ED084817, 43 p., 1974.

"Question Choice in Examinations: An Experiment in Geography and Science,"
E.G. Taylor and D.L. Nuttall, Educational Research (British), 16,
pp. 143-50, February 1974.

"Behavioral Objectives for Geography Facilitate Communication and Increase
Test Performance," E.A. Glowatski, Journal of Geography, 72, pp. 36-44,
October 1973.

"Preparing Tests to Measure Course Objectives," J.J. Monk, Journal of
Geography, 70, pp. 157-62, March 1971.

"Geography Achievement Test," N.V. Scarfe, Journal of Geography, 64, pp. 325-5,
October 1965.

"Improving Elementary Geography: Tests in Geography," M.J. Rice, Elemen-
tary School Journal, 66, pp. 134-6, December 1965.

A Standardized Information Test in Economic Geography, Shepherd, Hilton D.,
(Ph.D. 1940, New York University), 239 p., W1940, p. 84.

Awareness and Retention

A Critical Analysis of the Discovery Versus Expository Research Studies
Investigating Retention or Transfer within the Areas of Science,
Mathematics, Vocational Education, Language, and Geography from 1908
to the Present, Weimer, Richard Charles, (Ph.D. 1974, University of
Illinois at Urbana-Champaign), 35/11, p. 7185A.

"Geographic and Environmental Illiteracy Among Educated Americans: An
Appraisal," R.H. Charlier and P.S. Charlier, Science Education, 54,
pp. 281-6, July 1970.

"Children's Awareness of Physical Geography," J.M. Sheridan, Journal of
Geography, 67, pp. 82-6, February 1968.

A Study of Retention in Geography, Tiedeman, Herman R., (Ph.D. 1941, The University of Iowa), 28 p., W1941, p. 90.

The Number of Repetitions Necessary to Memorize and Retain with Maximum Certainty a Miscellaneous Collection of Facts in History or Geography, Wagner, Alvin, E., (Ph.D. 1910, University of Pennsylvania), 37 p., S0175, p. 42.

Map Conceptualization

Perspective Ability and Map Conceptualization in Elementary School Children, Cobb, R.L. and Stoltman, J.P., Research in Education (ERIC) 09 ED086615, 12 p., 1974.

"Measuring Perspective Ability," J.W. Miller, Journal of Geography, 66, pp. 167-71, April 1967.

"Map Understanding as a Possible Crystallizer of Cognitive Structures," D.H. Feldman, American Educational Research Journal, 8, pp. 485-501, May 1971.

The Effect of Teaching Coordinate Geometry on the Understandings of Selected Geographic Concepts in the Fifth Grade, Herbst, Leonard Alfred, (Ed.D. 1967, University of California, Berkeley), 182 p., 28/07-A, p. 2599.

The Effect of Training on Accuracy of Angle Estimation, Waller, T.G. and Wright, R.H., George Washington University, Alexandria, Virginia, Research in Education (ERIC) 09 ED093721, 34 p., 1974.

Extent of Certain Geographical Skills of Latitude and Longitude of Selected Fifth and Sixth Grade Children, Rabozzi, Mario Donald, (Ed.D. 1961, The Pennsylvania State University), 235 p., 23/05, p. 1630.

"Fourth and Sixth Grade Students' Knowledge of Topographical Terms," A.K. Ellis, Journal of Geography, 68, pp. 344-6, September 1969.

An Investigation into the Optimum Age at which Different Types of Map Questions May Best be Set to Pupils in the Teaching of Geography, Brown, T.W. and others, International Geographical Union, Research in Education (ERIC) 04 ED064191, 39 p., 1972. (non U.S.)

Spatial Studies

Children's Thinking in the Social Studies: I. Some Factors of Sequence and Transfer in Learning the Skills of Geographic Analysis, Crabtree, Charlotte, Los Angeles: Technical Report, Graduate School of Education, University of California, Los Angeles, 1974.

Piaget's Geographical Spatial Stages: An Examination of Their Relationship to Elementary Children's Classification-Class Inclusion Abilities, Rand, D.C. and Towler, J.O., Presented to the Annual Meeting of the National Council for Geographic Education, Research in Education (ERIC) 09 ED086616, 33 p., 1974.

The Relationship Between Children's Classification-Class Inclusion Abilities and Geographic Knowledge as Measured by Piaget's Spatial Stages, Rand, David Cooper, (Ph.D. 1973, Purdue University), 34/07, p. 48885A.

Territorial Decentration and Geographic Learning, Stoltman, J.P., Paper presented to the International Geographical Congress Commission on Geography in Education at Laval University, Quebec City, Canada, Research in Education (ERIC) 02 ED071933, 9 p., 1973.

The Development of Linear and Areal Scale Concepts in Children, Hayes, Harold L., (Ed.D. 1973, University of Georgia), 117 p., 34/06, p. 3139A.

"Maturation of Spatial Ability in Geography," A.J. Heamon, Educational Research, 16, pp. 63-6, November 1973.

"Children's Cognitive Organization of Space," Asmussen, Dennis G., University of Washington, 1971, microfilmed.

An Application of Selected Piagetian Spatial Tests to Geographic Education, Sataneck, Mary Clareanne, (Ph.D. 1971, Case Western Reserve University), 90 p., 32/08-A, p. 4429.

"Elementary School Child's Concept of Scale," J.O. Towler and L.D. Nelson, Journal of Geography, 67, pp. 24-8, January 1968.

An Analysis of the Aspects of Space Involved in the Teaching and Learning of Geography in the Intermediate Grades, Edwards, John H., (Ph.D. 1953, University of Pittsburgh), 323 p., W1953, p. 218.

Elementary

Some Basic Geographic Concepts to Which Elementary Students Can Relate Subsequent Knowledge, Ross, Mildred Elizabeth, (Ed.D. 1959, The Pennsylvania State University), 255 p., 20/08, p. 3226.

"Geography Understandings of the Primary Child," J.D. McAulay, Journal of Geography, 65, pp. 170-6, April 1966.

Evaluation of a Conceptual Geography Unit for Kindergarten, Imperatore, William Alexander, (Ed.D. 1970, University of Georgia), 385 p., 31/08-A, p. 3779.

An Investigation of Beginning First Grade Children's Awareness Regarding A Selected Number of Concepts of Physical Geography, Sheridan, Jack Michael, (Ed.D. 1964, University of Oregon), 167 p., 25/10, p. 6549.

"Second Grade Children's Growth in Comprehension of Geographic Understandings," J.D. McAulay, Journal of Geography, 65, pp. 33-7, January 1966.

Teaching Geography in Grades One Through Three: Effects of Instruction in the Core Concept of Geographic Theory, Final Report, Crabtree, C.A., California University, Los Angeles, Research in Education (ERIC) 4 (01) ED021869, 329 p., 1969.

The Effects on Achievement of Using the Forced Inferential Response Mode in an Intermediate Grade Population-Geography Unit, Dale, J.R., Georgia University, Athens, Research in Education (ERIC) 03 ED075317, 140 p., 1973.

A Study of Fourth-Grade Productive Thinking Instruction in Two Content Areas: Language Arts and Geography, Fitzgerald, C.J., University Microfilms, (Ed.D., Columbia University), Research in Education (ERIC) 05 ED079720, 148 p., 1973.

"Assessment of the Geographic Learning of Fifth-Grade Students in Michigan: Michigan Elementary Geography Test," N.C. Bettis and G.A. Manson, Journal of Geography, 74, pp. 16-24, January 1975.

The Relationship of Transiency and Geographic Mobility to the Social Studies Understandings, Attitudes, and Skills of Sixth Graders, Pretzlaff, Richard E., (Ph.D. 1969, Wayne State University), 158 p., 30/09-A, p. 3648.

Predicting Aptitude for Modern Geographic Concepts in Sixth Grade Pupils, Pelow, Randall Arthur, (D.Ed. 1971, The Pennsylvania State University), 174 p., 33/01-A, p. 148.

An Evaluation of Geography Achievement of Grade 8A Chicago Public School Pupils in Terms of Certain Objectives, O'Hearn, Alden, (Ph.D. 1954, Loyola University of Chicago), W1954, p. 207.

Secondary

The Perceived Political Space of Georgia High School Seniors, Ehemann, J.H., (Ed.D. 1974, University of Georgia), 35/10, p. 6536-A.

An Evaluation of High School Seniors Knowledge of Anglo-American Geographic Concepts (Education, Curriculum, Development), Hromyk, William John, (Ph.D. 1972, University of Oregon), 33/09, p. 4797A.

"Most Visible Countries and Cities: Geography With a Current Events Perspective," G.P. Mason and E.E. Owen, Journal of Geography, 70, pp. 260-2, May 1971; Reply, W.B. Kory, 71, p. 4, January 1972.

A Measure and Analysis of Geography Achievement in 20 Junior-Senior High Schools of Pennsylvania, Zacur, Maurice Monroe, (Ed.D. 1970, The Pennsylvania State University), 219 p., 32/01-A, p. 263.

"Geographic Awareness of Eleventh Grade United States History Students," H.S. Zdankowski, Journal of Geography, 69, pp. 475-9, November 1970.

Images of Africa: A Report on What American Secondary School Students Know and Believe About Africa South of the Sahara, Beyer, B.K. and Hicks, E.P., Carnegie-Mellon University, Pittsburgh, Pa., Research in Education (ERIC) 4 (03) ED023693, 40 p., 1969.

College

"Geography and the College Freshman: A Louisiana Case Study: Student Recognition of the Political Boundaries of the United States," T.F. Reilly, Journal of Geography, 73, pp. 4-6, December 1974.

On Monitoring a College Course, Fink, L.D., Chicago University, Illinois, Research in Education (ERIC) 04 ED064217, 8 p., 1972.

"Do College Students Know Their Geography?" W.W. Black, Social Studies, 62, pp. 16-20, January 1971.

An Analysis of Factors Related to Academic Achievement in Introductory Geography at the University of Arkansas, Green, Joe L., (Ed.D. 1970, University of Arkansas) 202 p., 31/04-A, p. 1510.

"Map Reading Abilities of College Freshmen Compared with those of Ninth Graders," E.E. Miller, Journal of Geography, 64, pp. 367-72, November 1965.

CHAPTER 6. TEACHER TRAINING

General

"Implication of Methodology in Training Teachers of Geography: A Micro Lab Session Using a Process Model," D.A. Pemberton and others, Journal of Geography, 73, pp. 26-38, January 1974.

Development of An Inservice Model For Implementing New Methodology In The Social Studies Curriculum, End of project period report, Volume IV, Research in Education (ERIC) 01 ED067313, 118 p., 1973.

A Handbook for Geography Teachers, Gabler, R.E., National Council for Geographic Education, Chicago, Illinois, Research in Education (ERIC) 04 ED065378, 282 p., 1972.

Geography In-Service Course, Teacher's Guide, Texas Education Agency, Austin, Research in Education (ERIC) 03 ED062257, 97 p., 1972.

Differential Effects of Self-Contained Teacher Education Kits on Pre- and In- Service Studies Teachers, Carswell, R.J. and Kurfman, D.G., Paper presented at the Annual Convention, American Educational Research Association, New York, New York, Research in Education (ERIC) 06 ED049957, 19 p., 1971.

Five Levels of Incompetence, Higher Education, Teaching, and the Education of Teachers, Report of the Grove Park Institute, Consortium of Professional Associations, Research in Education (ERIC) 06 ED052148, 265 p., 1971.

An Evaluation of a Voluntary Activities Program as an Enrichment to the Teaching of Geography for Prospective Teachers, Keinard, Alvin S., (Ed.D. 1956, The Pennsylvania State University), 243 p., 16/08, p. 1374.

Changes in Attitudes with Different Methods of Teaching Geography in a Teacher Education Institution, Vent, Herbert J., (Ph.D. 1949, Stanford University), W1949, p. 126.

The Evolution of Human Geography in Teacher Education, Arundel, Edna, (Ph.D. 1942, Yale University), 274 p., 29/08-A, p. 2427.

The Pedagogy of Geography, Gibbs, David, (Ph.D. 1906, Clark University), 62 p., S0048, p. 16.

Institutes

Regional Geography of the American Southwest for Teachers and Trainers of Teachers of Indians and Mexican-Americans, Director's Report, Oklahoma University, Norman, Research in Education (ERIC) 06 ED045518, 147 p., 1971.

"Institute for Regional Geography of the American Southwest: EPDA Institute for Teachers of Indians and Mexican-Americans," J.M. Goodman and W.W. Elam, Journal of Geography, 69, pp. 493-7, November 1970.

- "A Study of the National Science Foundation Institutes in Science and Mathematics Held at the University of Idaho from 1957 Through 1964 and their Impact on Professional Activities of the Recipients," University of Idaho, 1969.
- "NDEA Geography Institutes and the Principal," J.R. Anderson, National Association of Secondary School Principals, Bulletin, 51, pp. 44-8, February 1967.
- "Critique of NDEA, Title XI, Institutes in Geography and History," D.B. Portzline, Social Education, 30, pp. 550-2, November 1966.
- "NDEA Institutes for Advance Study in Geography," Journal of Geography, 65, pp. 38-40, January 1966.

Elementary

- Geography and Teacher Inservice Education: A Study of Applications of Spatial Inquiry for Curricular Improvement in the Elementary School, Bennett, Harvey Oran, (Ph.D. 1972, University of Oregon), 191 p., 33/05-A, p. 2208.
- A Study to Determine the Degree to Which Selected Elementary Education Majors at the University of Southern Mississippi have Acquired Certain Concepts and Knowledge in Geography, Nissen, Marion Faye Ethridge, (Ph.D. 1970, University of Southern Mississippi), 62 p., 31/12-A, p. 6456.
- "Improving Elementary Geography: Teacher Preparation and Certification in Geography," M.J. Rice, Elementary School Journal, 66, pp. 128-30, December 1965.
- A Comparison of the Knowledge of Geographic Terms Exhibited by Teachers of the Middle Grades, Billingham, William Edward, Jr., (Ph.D. 1962, The University of Connecticut), 109 p., 23/05, p. 1656.
- A Study of Elementary Teachers' Attitudes Toward Curricular Patterns, Methods, and Materials in Geography and History in the State of Louisiana, Lucar, Janet, (Ed.D. 1958, University of Houston), 230 p., 19/05, p. 989.
- The Preparation of Elementary Teachers in Geography, Norcross, Claude E., West, Robert L., (Ed.D. 1955, Stanford University), 124 p., 16/04, p. 710.

Secondary

- Contemporary Preparation of Teachers of Geography for Secondary Schools in Pennsylvania, Procasky, William John, (Ph.D. 1974, University of Pittsburgh), 35/04, p. 2151A.
- "Geography in the Pre-Service Education of Senior High School Teachers," E.L. Groenhoff, Journal of Geography, 69, pp. 351-3, September 1970.

The Status of Geography in the Pre-Service Education of Senior High School Teachers of the Social Studies, Groenhoff, Edwin Leroy, (Ed.D. 1968, University of Colorado), 267 p., 29/04-A, p. 1151.

An Analysis of the Academic Preparation and Teaching Assignment of Idaho High School Social Studies Teachers, Anderson, Lawrence, (Ph.D. 1967, University of Idaho).

"Status of Geography in the High School Today: Teacher Preparation," M.L. Frick, Journal of Geography, 64, pp. 318, October 1965.

College

The University of Colorado Department of Geography Graduate Program in Geographic Education, Research in Education (ERIC) 09 ED084191, 17 p., 1974.

The Teaching and Learning in Graduate Geography Project, Knos, D.S. and Lindberg, J.B. Clark University, Worcester, Mass., Illinois Univ., Urbana, Iowa University, Iowa City, Papers presented at the Annual Meeting of the National Council for Geographic Education, Research in Education (ERIC) 10 ED096209, 1975.

Teaching Preparation Program (TPP), California University, Los Angeles, Paper presented at the Annual Meeting of the National Council for Geographic Education, Research in Education (ERIC) 10 ED096240, 12 p., 1975.

An Analysis of the Programs for the Preparation of Prospective Teachers of Geography in Selected Southern States, Marcus, Robert Brown, (Ed.D. 1956, The University of Florida), 169 p., 16/12, p. 2393.

AUTHOR INDEX

<u>Name of Author</u>	<u>Page Number</u>
Addy, James Arthur	.11
Alilunas, L.J.	10
Anderson, J.R.	39
Anderson, Lawrence	.40
Anderson, Randall Carl	3, 14, 15
Anderzhon, M.L.	.14, 18
Antonelli, M.F.	.1
Arbital, S.L.	15
Arnsdorf, V.	11, 19
Arundel, Edna	.38
Asmussen, Dennis G.	.35
Augelli, J.P.	.2
Aven, S.D.	.21
Bacon, P.	.2, 9, 10, 14, 19
Baird, R.M.	.7
Baker, Emily H.	10
Ball, J.M.	6, 7
Ballas, D.J.	.8
Barson, J.	.33
Bartz, B.S.	18
Baumann, P.R.	.20
Bechtel, Donald Leon	.25
Beck, A.D.	.1
Becker, Christian F.	.3
Beckman, R.	21, 26
Belgum, Loretta Elaine	19
Bellack, A.A.	.6
Bemis, James Richard	.10
Bennett, Harvey Oran	39
Bergen, J.V.	31
Berry, Mary Tom	.25
Bettis, N.C.	.36
Beyer, B.K.	7, 36
Billingham, William Edward, Jr.	.39
Bivens, L.W.	.21
Black, W.W.	.37
Bloomer, Francis Eldon	.6
Boehm, R.G.	.16
Borchert, J.R.	.5
Bradbury, M.J.	.15
Brix, A.J.	.15
Brodsky, H.	.23
Brooks, Hugh C.	.23
Brooks, Nathan C.	.3
Broek, J.O.M.	.12
Bronson, Judith Ann Conoyer	.2
Brown, Daniel H.	11
Brown, R.H.	.1
Brown, T.W.	34

<u>Name of Author</u>	<u>Page Number</u>
Bugman, Ruth Christine	22
Burdick, Alger E.	2
Cadugan, William Hayden	24
Campbell, V.N.	21
Carmichael, Dennis R.	18
Carswell, R.J.	38
Carter, Alfred William	10
Carter, D.B.	31
Caruso, Mary L.	11
Casper, Berenice M.	5
Chapman, A.	2
Chappell, John E., Jr.	2, 15
Charlier, P.S.	33
Charlier, R.H.	33
Chatham, R.L.	26
Chauvin, Robert S.	27
Chorley, R.J.	14
Cirrincione, Joseph M.	1
Clegg, A.A., Jr.	17
Cobb, H.	27
Cobb, R.L.	34
Cole, R.A.	9
Collins, A.M.	20
Connors, Robert E.	15
Conroy, W.B.	2, 15, 24
Cotton, James Vaughn.	4
Crabtree, C.	15, 34, 35
Craddock, R.S.	19
Croft, Jerry Don	17
Cuetara, B.	16
Culler, Ned	25
Dale, J.R.	27, 36
Daniels, William Davis	30
Dando, W.A.	16
Davis, A.R.	17
Davis, George Arliss	12
Davis, J.K.	22
Davis, O.L., Jr.	18
De Blij, H.J.	16
DeLeeuw, G.	5, 15
Doiron, Claude J., Jr.	8
Donaldson, O.F.	7
Douglass, Malcolm Paul	10
Drummond, D.W.	11
Dudding, J.L.	16
Edwards, J.H.	18, 35
Ehemann, J.H.	36
Elam, W.W.	38
Ellis, A.K.	22, 34
Emry, June	6
English, P.W.	8

<u>Name of Author</u>	<u>Page Number</u>
Espenshade, E.B., Jr.	18
Eskridge, Thomas J., Jr.	11
Fagan, J.S.	28
Feldman, D.H.	34
Fielding, G.J.	20
Fink, L.D.	32, 37
Fitzgerald, Catherine Joan	22, 36
Floyd, B.N.	8
Fluitt, John Loy	31
Fraenkel, Jack Runnels	21
Franks, F.L.	7
French, Lloyd Charles	19
Frick, M.L.	3, 40
Froiseth, K.W.	12
Gabler, R.E.	38
Gandy, Willard Eugene	3, 24
Geib, R.D.	29
George, Michael, Jr.	24
Getis, A.	9
Getis, J.	9
Gibbs, David	38
Giffard, E.O.	26
Gildea, R.Y., Jr.	21
Gill, C.C.	24
Glowacki, W.M.	3, 12, 18
Glowatski, E.A.	33
Goodman, J.M.	38
Gray, R.	8
Greco, P.V.	24
Green, Joe L.	37
Grieve, T.D.	22
Griffin, Paul Francis	2, 26
Groenhoff, E.L.	39, 40
Gross, H.H.	2, 10
Grove, Arthur M.	13
Gunn, A.M.	29
Haffner, Hyman	25
Haggett, P.E.	14
Hallquist, Robert Nels	26
Hamilton, W.G.	16
Harper, R.A.	1, 6
Hart, J.F.	9
Hartshorne, R.	1
Hastings, J.T.	32
Hayes, Harold L.	35
Healy, J.R.	20
Heamon, A.J.	35
Helburn, N.	3, 12, 30, 31
Henzl, Elizabeth Mary	15
Herbst, Leonard Alfred	34
Herr, A.	21
Hicks, E.P.	36
Hildore, J.J.	14

<u>Name of Author</u>	<u>Page Number</u>
High, Lois Ann	25
Hill, A.D.	30
Hills, J.L.	16
Horn, R.E.	17
Hornstein, H.A.	24
Horsley, Albert Doyne	17
Hoskins, M.	19
Houghton, D.M.	9
Hromyk, William John	36
Hudman, L.E.	7, 14, 23
Hunkins, F.P.	18
Hunter, J.M.	16
Hurst, M.E.	9, 19
Imperatore, W.	7, 10, 27, 35
Jakubs, J.F.	17
James, P.E.	1
Janelle, D.G.	32
Jetes, Teddy Leroy	29
Johnson, B.A.	16
Johnson, H.B.	1
Johnson, J.	27
Jones, F.G.	20, 28
Julian, Sister Mary	14
Junge, Ruby M.	12
Kaltsounis, T.	14
Kariel, H.G.	5
Kasperson, R.E.	30
Keinard, Alvin S.	38
Kenamer, L.	10, 14
Kibel, B.M.	17
Kilcoyne, John	26
King, Franklin LaFayette	26
King, L.	16
Knos, D.S.	40
Koch, W.F.	12
Kohn, C.F.	2, 6, 5, 19, 29
Komoski, P.K.	19
Kory, W.B.	36
Kostbade, J.T.	2
Kracht, J.B.	16
Krumme, G.	8
Kurfman, D.G.	29, 32, 38
Lachs, J.	12
Lackey, Earl E.	31
Lahnston, Anton T.	15
Landing, J.E.	4
Lanegran, D.A.	7
Langhans, Elizabeth Jeremy	25
Lee, J.R.	22
Lewis, L.T.	7
Lewis, T.R.	12
Lindberg, J.B.	15, 40

<u>Name of Author</u>	<u>Page Number</u>
Littlefield, Henry Miller	26
Loar, Dorothy Marie Cronin	22
Long, Michael Thayne	8
Loomer, H.T., Jr.	20
Lounsbury, J.F.	4
Lucar, Janet	39
Lyon, Edward Ellsworth	20
McAulay, J.D.	3, 27, 35
McCarthy, M. Clare	20
McCauley, Huey Silton	3
McDermott, G.L.	17
McDermott, P.D.	18
McDowell, Horace Greeley	4
Malcolm, Dolphin Vernon	5
Mank, E.R.	28
Manners, I.R.	9
Manson, G.A.	36
Marcus, Robert Brown	40
Margulis, H.L.	32
Marsh, C.	29
Martorella, P.H.	22
Mason, G.P.	36
Matthews, L.	15
Matthews, W.H.	29
Mattran, G.C.	5
Mayo, William Leonard	3
Meierding, B.S.	20
Melvin, R.W.	9
Meyer, A.H.	23
Meyer, J.M.W.	18
Mikesell, M.W.	9
Miller, E.E.	37
Miller, J.W.	26, 34
Monk, J.J.	33
Moore, E.	18
Moreland, Edwin Charles	11
Morgan, V.	9
Morris, Rita Mary	4
Morris, J.W.	6, 8
Multhauf, Delmar Charles	23
Napp, J.L.	10
Natoli, A.	18
Natoli, S.J.	30
Nelson, L.D.	35
Nelson, R.F.	14
Nichols, A.S.	9
Nishi, M.	6
Nissen, Marion Faye Ethridge	39
Nolan, C.Y.	7
Norcross, Claude E.	39
Nostrand, R.L.	1

<u>Name of Author</u>	<u>Page Number</u>
Novak, Robert T.	29
Nowak, W.S.	6
Noxon, Charles Jay	23
Nuttall, D.L.	33
Ogren, Albert John, Jr.	16
O'Hearn, Alden	36
O'Hern, J.H.	17
O'Kelley, M.W.	10
Okunrotifa, P.O.	5, 21, 24, 32
Ostapchuk, William John	25
Owen, E.E.	36
Palm, Risa Ileen Kahn	1
Pannell, Clifton W.	16
Parker, Jesse Joe	25
Parsons, T.W.	15
Pattison, W.D.	18
Patton, D.J.	29
Pawling, J.W.	8
Pelletti, John Charles	26, 28
Pelow, Randall Arthur	36
Pemberton, Dixie Ann	14, 38
Penna, A.N.	7
Peters, William	32
Phillips, I.M.	29
Phillips, William F.	26
Picker, R.D.	14
Pierfy, David Arthur	17
Portzline, D.B.	39
Pratt, R.B.	30
Pretzlaff, Richard E.	36
Procasky, William John	39
Proctor, N.	1
Prunty, M.C.	7
Rabiega, W.A.	17
Rabozzi, Mario Donald	34
Rader, W.D.	5
Rafferty, M.D.	16
Ramsaur, Robert T.	23
Rand, D.C.	34, 35
Reeder, Edwin Hewett	22
Reeve, R.H.	26
Reilly, T.F.	37
Reiman, Robert Ellis.	12
Renner, George T. III	27
Rice, Hugh Smith	25
Rice, M.J.	22, 24, 27, 33, 39
Richason, B.F., Jr.	17, 21
Richburg, R.W.	29, 32
Ritter, Olive Pearl	25
Roberson, B.S.	2
Robertson, Floyd Charles.	4

<u>Name of Author</u>	<u>Page Number</u>
Rodgers, F.A.	21
Ross, Mildred Elizabeth.	35
Rowley, Virginia Marie.	2
Rumage, K.W.	20
Rushdoony, H.A.	18
Ryan, F.L.	21, 33
Ryba, R.H.	5
Sahli, John Rankin	25
Satanek, Mary Clareanne	35
Saveland, R.	8, 27
Scarfe, N.V.	1, 6, 33
Schallert, R.E.	7
Schmieder, A.A.	1
Schomburg, Carl Edward	24
Schwartzberg, J.E.	12
Scull, Robert C.	19
Seidman, Laurence Ivan	26
Senninger, E.J.	18
Shafer, S.M.	21
Shaftel, F.R.	15
Shaw, M.G.	6
Shepherd, Hilton D.	33
Sheridan, J.M.	33, 35
Shinn, R.F., Jr.	6
Shyrook, Clara May	32
Sims, Joe Venton	21
Slater, Frances Ann	33
Smith, Ruth I.	25
Stadt, R.W.	7
Stampfer, N.	22
Steinbrink, J.E.	8, 9, 11, 27
Stephenson, L.K.	20
Stevens, D.J.	16
Stoltman, J.P.	5, 34, 35
Stone, K.H.	8
Storst, Cyril L.	25
Stowers, Dewey Marion, Jr.	24
Strader, Robert	3
Stuart, M.M.	30
Swartz, R.D.	9
Tam, P.T.	26
Tanner, G.	32, 26
Taylor, E.G.	33
Terich, T.A.	12
Terry, Joseph E.	13
Thomas, Eric Hubert Gwynne.	24
Thompson, A.G.	18
Tiedeman, Herman R.	34
Til, W. Van	6
Tobias, S.	21
Tomkins, George Strong	2, 5

<u>Name of Author</u>	<u>Page Number</u>
Towler, J.O.	9, 34, 35
Trevaskis, Graham Arthur	13
Underwood, Robert Marshall	3
Uslan, David Theodore	20
Vandermeer, A.	19
Van Orman, E.G.	14
Van Orman, M.E.	14
Veltkamp, James J.	3, 11
Vent, Herbert J.	38
Vining, J.W.	1
Vuicich, G.	5, 30
Wagner, Alvin E.	34
Wallace, Clara M.	25
Waller, T.G.	34
Walton, W.W.	24
Warman, H.J.	5, 6, 8
Watts, Ann Rorem	14
Weaver, V.P.	10
Weimer, Richard Charles	33
Weisgerber, R.A.	21
West, Robert L.	39
Wheeler, J.O.	12, 16
Whipple, G.	18
Whitaker, J.R.	1
White, G.F.	2
White, W.R.	6, 26
Wiedel, J.W.	16
Williams, J.A.	12, 15
Wilson, Joe Wayne	22
Wilson, Karl K.	25
Womack, James Alonzo	30
Wood, L.A.	22
Wood, R.L.	22
Wright, R.H.	34
Zacur, Maurice Monroe	36
Zakazewska, B.	17
Zdankowski, H.S.	36
Zepp, George Daniel	22
Zuckerman, D.W.	17